FINAL

SCOPING STUDY

KY 61
Item #4-128.00
Adair & Green Counties
Columbia to Greensburg

Prepared for

KENTUCKY TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS
DIVISION OF PLANNING

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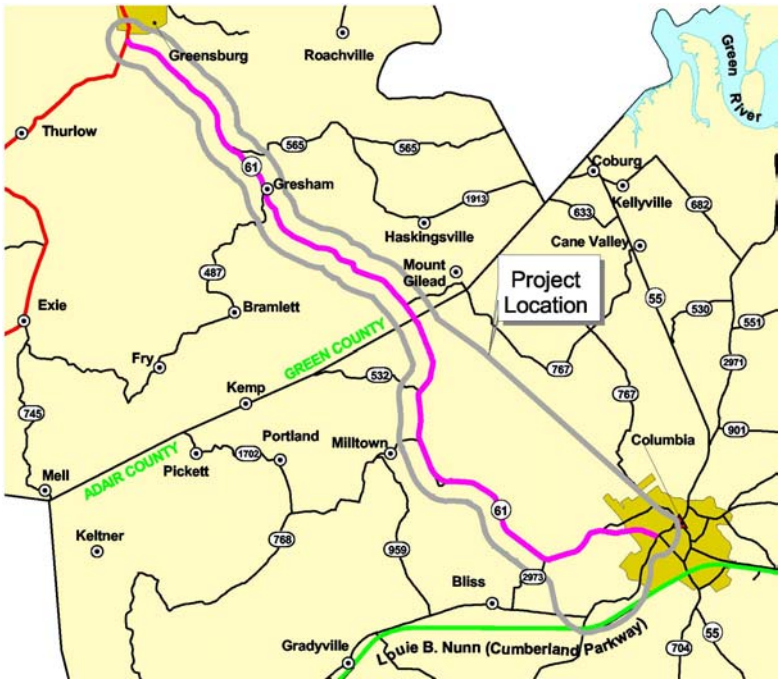

EXECUTIVE SUMMARY
SCOPING STUDY
KY 61, ADAIR & GREEN COUNTIES
COLUMBIA TO GREENSBURG
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The proposed highway project is located between Columbia in Adair County and Greensburg in Green County which is in the south central portion of the state. The project is defined in the *Approved 2000-2002 Biennial Highway Construction Program and Identified Preconstruction Program Plan for FY 2003 through FY 2006* (generally referred to as the Six Year Highway Plan) as a Scoping Study (Item No. 04-128.00) and Reconstruction (Item No. 04-128.10) of KY 61. Approximately 17 miles in length, the project area is located between the junction with KY 80 in Columbia and the junction with US 68 in Greensburg.

The existing traffic volumes along KY 61 in Adair County range from 1,240 vehicles per day (vpd) at the Green County Line to 6,060 vpd within the Columbia Corporate Limits. In Green County, the existing traffic volumes along KY 61 range from 1,240 vpd near the Adair County Line to 5,370 vpd at KY 88 north of Greensburg. Year 2025 daily traffic volumes range from about 2,030 vpd to 9,940 vpd along KY 61 in Adair County. In Green County, future volumes along KY 61 range from 2,030 vpd to 8,810 vpd.

Goals established for this project include:

- Improve safety by improving the geometric qualities of the roadway;
- Provide an improved facility for truck traffic; and,
- Provide a National Truck Network or AAA (80,000 lbs gross vehicle weight) weight classification highway facility to improve accessibility in the study area. Within the project study area, KY 61 is AA rated for gross vehicle weight. Green County has minimal AAA and National Truck Network access: a short section of US 68 (milepoint 16.628 to 18.411) is included in the National Truck Network, US 68 is classified as a AAA route throughout the county, and a portion of KY 936 (milepoint 0.0 to 1.626) is classified as a AAA route. This type of access is critical to maintain and attract industry to the county.

Environmental concerns and issues determined for this project include:

- Section 106 of the National Historic Preservation Act may influence this project because of two historic homes within the study area, the Groves-Cabell House and the John Field House. The Jane Todd Crawford historic homesite and Jane Todd Crawford Trail are other historical areas that should be considered during the analysis.
- Greensburg is currently participating in the Governor's Renaissance Program and would like to see the historical integrity of the roadway preserved through context-sensitive design.
- The need to address water quality issues is based on the possible destruction of any Hydrocarbon exploration wells and the resulting potential for contamination from subsurface zones containing hydrocarbons and/or brackish water. Construction activities near these features may impact water quality. A total of 60 wells (38 Hydrocarbon exploration wells) and one (1) water gauge were located within the project area.
- According to the Endangered Species Act of 1973 and the Kentucky Rare Plant Recognition Act certain species of Bivalve, Fish, Mammal and Plants are closely monitored. Some types of these are expected to be found within the study area.

- According to the Kentucky State Nature Preserves Commission, this project could be impacted by several rare species documented to occur within the project area. These include the Gray bat and several rare aquatic species in Russell Creek including Kentucky Creekshell.
- According to a local participant in the study, a cave having a potential brown bat community is located about 2 miles south of Greensburg on the west side of KY 61 and another cave is located along KY 565 about 0.5 miles south of the KY 61/KY 565 intersection.

Other project issues identified through this study include:

- Twenty-one percent of Green County's population is at or below poverty. Only one (1) tract and one (1) block group within the county's project area have percentages that are higher than the state and county as a whole. Tract 990200 and block group 990200-2 have percentages of persons in poverty of 22.5 percent and 26.5 percent respectively.
- Bicycle facilities should be integrated into the roadway design to promote tourism and maintain the historical characteristic of the corridor.
- There is frequently a flooding problem at the junction of Caney Creek and KY 61.

Through the course of this Scoping Study, four "build" alternates have been identified for the improvement of KY 61. The corridor alternates are generally defined as follows:

- Alternate 1 – Spot improvements along the existing KY 61 corridor from Columbia to US 68 in Greensburg;
- Alternate 2 – Minor widening of the existing KY 61 corridor with some curve corrections and realignment;
- Alternate 3 – Realignment of the KY 61 corridor from the proposed Columbia bypass to US 68 in Greensburg; and,
- Alternate 4 – Alternate 3 plus a link to the proposed KY 61 interchange with the Louie B. Nunn (Cumberland) Parkway.

Each of the four corridor alternates were evaluated based on a number of factors: project costs, traffic considerations, environmental issues, identified project goals, and information gathered through the public involvement effort. Alternate 4 was selected as the recommended corridor based on these factors. Considering the anticipated cost estimates, the programming of additional funds will likely be required in order to complete the project development activities:

Phase	Scheduled Funds	Recommended Funds
Planning	$250,000	--
Design	$750,000*	$5,500,000
Right-of-Way	--	$9,040,000
Utility Relocation	--	$2,260,000
Construction (includes bridges)	--	$39,200,000
Total	$1,000,000	$56,000,000

* Design priority section

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I. INTRODUCTION

The goal of this Scoping Study was to define and gather critical information on the project prior to the design phase, which is currently scheduled to begin in the next Fiscal Year (FY 2002, i.e., July 1, 2001 – June 30, 2002). The project is identified in the Kentucky Transportation Cabinet's (KYTC) *Approved 2000-2002 Biennial Highway Construction Program and Identified Preconstruction Program Plan for FY 2003 through FY 2006* (generally referred to as the Six Year Highway Plan) as Item No. 04-128.10. This report provides a general introduction and description of the project; identifies proposed improvements; presents a traffic and environmental overview of the proposed project area; evaluates environmental justice impacts; summarizes the public and agency input received to-date on the project; considers four (4) potential corridor alternatives; and provides recommendations and next steps for project development.

A. Study Tasks

This study is intended to better define the proposed reconstruction of the KY 61 corridor, help expedite the highway project development process, and identify potential environmental issues. The study process also affords an opportunity for public and agency input so that project needs, improvement alternatives, issues and concerns can be clearly defined at the earliest stage of project development.

Items involved with this study include:

- Define project goals;
- Identify project termini and potential alternate corridors;
- Identify preliminary environmental and other concerns;
- Initiate contact with public officials and agencies;
- Listen to and share information with the public; and,
- Provide recommendations for an improved corridor.

B. Programming and Schedule

The current schedule for the project includes the following phases, timeline and funding. As shown, the Design Phase of the project, addressed in this study, is scheduled in the current Six Year Highway Plan for FY 2002 with committed funds of $750,000. Subsequent phases of project development, including Right-of-Way, Utility Relocation, and Construction have not been scheduled.

Phase	Timeline	Amount
Planning	FY 2001	$250,000
Design	FY 2002	$750,000*
Right-of-Way	Not Scheduled	Not Scheduled
Utility Relocation	Not Scheduled	Not Scheduled
Construction	Not Scheduled	Not Scheduled

* These funds are for the priority section only.

II. PROJECT LOCATION, EXISTING CONDITIONS AND TRAFFIC

A. Project Location

The proposed highway project is located between Columbia in Adair County and Greensburg in Green County which is in the south central portion of the state, as shown in **Figure 1** (**Appendix A**). A more detailed view of the study area defined for the project is shown through the digital orthophotographs in **Figures 2 and 3**, also in **Appendix A**.

B. Existing Highway Features

Characteristics of the major highways in the study area are identified in the following sections. Included are highway systems, geometric characteristics, bridges, traffic and level of service, accident history, and programmed highway improvements.

Features of state highways in the study area are summarized from the KYTC Highway Information System (HIS) database. The HIS database includes information for the major routes in the existing state maintained roadway system. Maps and detailed table summaries of the HIS information for the major routes in the study area can be referenced in **Appendix A** and **Appendix B**, respectively. Please note that tables in **Appendix B** may also include roadway segments which fall outside of the mapped study area. Photographs of some of the study area routes and features are contained in **Appendix C**. Study area roadways considered as part of this analysis include portions of:

- US 68;
- KY 55;
- KY 61;
- KY 80;
- KY 417;
- KY 439;
- KY 487;
- KY 532;
- KY 565;
- KY 767;
- KY 768; and,
- KY 2973.

C. Highway Systems

According to the HIS data included in **Table 1** in **Appendix B**, there are no National Highway System routes within the study area. **Table 1** also provides information about the state system classifications as well as functional classifications for routes in the study area. In Adair County, the KY 61 study corridor is classified as a State Primary route, a Defense Highway System route, a Rural Major Collector (milepoint 7.85 to 15.248), and a Rural Minor Arterial (milepoint 15.248 to 23.997). In Green County, the KY 61 study corridor is classified as a State Primary route, a Defense Highway System route, and a Rural Minor Arterial.

The Kentucky Revised Statute requires weight limits on the state-maintained highway system. With the exception of permits for over dimensional or over gross vehicle weight classification limit vehicles issued by the KYTC, Division of Motor Carriers, there are three weight classification limits:

- AAA – 80,000 lbs. gross vehicle weight
- AA – 62,000 lbs. gross vehicle weight
- A – 44,000 lbs. gross vehicle weight

Table 1 lists the gross vehicle weight classification limits for each route in the study area. As shown in the table, KY 61 is classified as a AA route within the study area.

The National Truck Network (NN) includes roads that have been specifically designated for use by commercial trucks with increased dimensions (102 inches wide; 13 feet, six (6) inches high; semi-trailers up to 53 feet long; trailers up to 28 feet long – not to exceed two (2) trailers per truck). The KY 61 corridor is not part of the NN system. There are three (3) routes in the study counties which are part of the NN system: 1) US 68 in Green County from KY 793 to the Taylor County line (milepoint 16.628 to 18.411), 2) KY 55 in Adair County from the Louie B. Nunn Parkway to the Taylor County line (milepoint (10.059 to 19.006), and the Louie B. Nunn Parkway in Adair County from the Metcalfe County line to the Russell County line (milepoint 36.159 to 57.791).

D. Geometric Characteristics

Geometric characteristics for major routes in the study area, listed in **Table 1**, include items such as the number of lanes, lane widths, shoulder widths, and speed limits. Between KY 80 and the Green County Line in Adair County, KY 61 currently has two (2) lanes with lane widths ranging from nine (9) feet to 10 feet. Within this section, 100% percent of lane widths are less than 12 feet and approximately 83 percent are less than 10 feet. Between the Adair County Line and US 68 in Green County, KY 61 currently has two-lane segments with a lane width of nine (9) feet. Within this section, 100% of lane widths are less than 12 feet and 100% are less than 10 feet.

The shoulder widths along KY 61 in Adair County are four (4) feet. Between the Adair County Line and US 68 in Green County, shoulder widths along KY 61 are one (1) foot. In this section, the posted speed limit of KY 61 in Adair County ranges from a minimum of 45 mph near the Columbia Corporate Limits to a maximum of 55 mph in most other areas. In Green County, the posted speed limit of KY 61 within the study area is 55 mph. Speed limits in the remainder of the study area range from 25 mph to 55 mph.

E. Bridges

Bridge data for the routes considered in this study are listed in **Table 2** in **Appendix B**. There are no bridges along the corridor with a sufficiency rating which is less than fifty (50). A bridge with a sufficiency rating less than fifty (50) is considered eligible for bridge replacement funds under the Federal-Aid Highway Bridge Replacement and Rehabilitation Program.

F. Traffic and Level of Service

The study area's traffic and operational conditions for each major route are listed in **Table 1** in **Appendix B**. For this project, both existing (Year 2000) and future (Year 2025) traffic volumes have been identified. Year 2025 traffic volumes with no transportation improvements have been calculated for the identified study area roadways. This scenario is discussed further in the following paragraphs.

Level of Service (LOS) is a qualitative measure defined in the Highway Capacity Manual and used to describe traffic conditions. Individual levels of service characterize these conditions in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. Six (6) levels of service are defined and are given letter designations from A to F, with LOS A representing free flow conditions and LOS F representing severe congestion. Typically, a minimum of LOS D

is acceptable in urban areas and LOS C in rural areas. Chapters 7, 8 and 11 of the 1998 Highway Capacity Manual, published by the Transportation Research Board (TRB), provide guidelines on the analytical procedures for estimating LOS for highways.

1. Existing Traffic Volumes and Level of Service (Year 2000)

The KYTC Highway Information System (HIS) database was used to provide the existing traffic volumes (Year 2000) for segments of the study area routes. Also, existing truck percentages were determined for the study area routes using the HIS data along with KYTC default values based on the functional classification of the segment.

The existing average daily traffic volumes (ADT) and the corresponding truck percentages are shown in **Figures 4** and **5** in **Appendix A** and **Table 1** in **Appendix B**. The existing traffic volumes along KY 61 in Adair County range from 6,060 vehicles per day (vpd) within the Columbia Corporate Limits to 1,240 vpd near the Green County Line. In Green County, the existing traffic volumes along KY 61 range from 1,240 vpd near the Adair County Line to 5,370 north of Greensburg.

Existing truck percentage values along KY 61 range from 7.5% to 10.4% of the total traffic in Adair County. In Green County, existing truck percentage values along KY 61 range from 7.8% to 10.6%.

As part of this study, the existing LOS was calculated for each segment along each route in the study area, as shown in **Table 1** in **Appendix B**, the level of service along KY 61 in Adair County ranges from LOS C within the Columbia Corporate Limits to LOS A in rural areas. In Green County, the level of service along KY 61 ranges from LOS A to LOS C in rural areas. Within the Greensburg Corporate Limits, near the junction of KY 61 and US 68, the level of service ranges between LOS C and D. Roadways located outside of the Columbia and Greensburg Corporate Limits generally operate at LOS C or better. Within the Columbia and Greensburg Corporate Limits, several segments experience LOS D and LOS E. As noted, LOS E represents unacceptable operating conditions and LOS D generally represents unacceptable operating conditions in rural areas. As shown in **Figure 5**, portions of KY 55 are currently operating at LOS E in an urban area.

2. Future Traffic Volumes and Level of Service (Year 2025)

As part of this study, the forecast of future trends in vehicle travel considers both historical traffic growth in the study area as well as state forecasts of future travel demand. For the purposes of this analysis, a compounded annual growth rate of 2.40 percent was assumed through Year 2025, resulting in a cumulative increase in vehicle travel of 81 percent from 2000 to 2025. The KYTC provided historical travel data for the past eleven years on which these percentages were based. Also, these percentages were compared with KYTC forecasts of statewide Vehicle Miles Traveled (VMT) in order to verify the assumption of 2.40 percent. It was assumed that the existing truck percentage values would remain constant through Year 2025.

The future (2025) average daily traffic (ADT) volumes are shown in **Figures 6 and 7** in **Appendix A**. These future volumes range from about 2,030 vpd to 9,940 vpd along KY 61 in Adair County. In Green County, future volumes along KY 61 range from 2,030 vpd to 8,810 vpd. Estimated traffic demand along the other routes in the study area ranges from approximately 50 vpd along KY 532 to 50,100 vpd along KY 55; however, due to the geometric constraints of a two-lane highway section, future

traffic volumes would likely be limited to a maximum of about 30,000 vpd along this section of KY 55.

Similar to the existing year, the LOS is calculated for Year 2025 levels of service with no transportation improvements. Future year levels of service are shown in **Figures 6** and **7** in **Appendix A** and **Table 1** in **Appendix B**. As shown in **Table 1**, traffic conditions along KY 61 in Adair County are expected to range from LOS A to LOS C in rural areas, with LOS D expected within the Columbia Corporate Limits. In Green County, traffic conditions along KY 61 are expected to range from LOS A to LOS C in rural areas. Within the Greensburg Corporate Limits, near the junction of KY 61 and US 68, the level of service is expected to range between LOS D and E. Conditions along the other routes in the study area are also expected to worsen. Portions of US 68, KY 55, KY 80 and KY 439 are expected to operate at LOS E and F, which are unacceptable operating conditions.

G. Accident Analysis

Accident data for the major routes in the study area were considered for a four-year period from January 1, 1996 to December 31, 1999. The location of accidents with valid milepoint designations, recorded in the HIS database, are shown by corridor segment in **Table 3** in **Appendix B** to determine possible high accident locations. A spot location or segment of roadway is considered to have a high accident rate when the total accident rate is higher than the critical accident rate for similar roads in the state.

When a spot location or segment has a critical rate factor greater than one (1.00), this indicates that accidents at this location may not be occurring randomly. The critical rate factors are calculated on the methodology presented in the Kentucky Transportation Center's report titled *Analysis of Traffic Accident Data in Kentucky (1993-1997)*.

As part of this process, each accident was classified into one (1) of three (3) categories based on the degree of severity: fatal, injury, or property-damage-only. There were 15 fatal, 193 injury, 462 property-damage-only accidents and 670 total accidents in the study area. Of these accidents, there were six (6) fatal, 79 injury, 112 property-damage-only accidents and 197 total accidents along KY 61 in the study area. **Figures 8 and 9** in **Appendix A** display the accident data by severity and location, along with the identified high accident segments. Spot locations and segments with high accident rates are also listed in **Table 3** in **Appendix B**.

Within the study area, one high accident segment was identified along KY 61 in Adair County from milepoint 12.879 to milepoint 14.252. Four high accident spot locations were identified along KY 61 in the study area. High accident spots, in the project area, were identified in six (6) locations in Adair County and in three (3) locations in Green County.

Other routes within the study area were shown to have historical accident rates higher than those for similar highway segments. High accident segments were identified along portions of KY 55, KY 80 and KY 439 in Adair County, along with US 68 in Green County. High accident spot locations were identified along KY 55 and KY 439 in Adair County, along with US 68 in Green County.

To determine the occurrence of truck accidents in the study area, the accident data was separated into one (1) of three (3) vehicle type categories: Truck, Auto, or Other vehicles. As shown in **Figures 10 and 11** in **Appendix A**, several truck accidents occurred along KY 61 within the study area. Between KY 80 East in Adair County (mile

point 15.248) and US 68 in Green County (milepoint 8.194), approximately 14.0 percent of accidents involved trucks in the four years of data considered. During the same time period, about 6.4 percent of all accidents in Kentucky involved trucks.

H. Programmed Highway Improvements

In addition to the proposed KY 61 Scoping Study, several other projects are planned and programmed for study area routes in the KYTC's *Six Year Highway Plan*, as outlined in **Table 4** in **Appendix B**. Major projects in the study area include:

- A western bypass of Columbia in Adair County;
- An eastern bypass of Greensburg; and
- Reconstruction of approximately 6.35 miles of KY 61, from Sparksville to near the Louie B. Nunn (Cumberland) Parkway.

III. CABINET, PUBLIC AND AGENCY INPUT

Throughout the course of this study, the local citizens, public officials and representatives of government resource agencies were given the opportunity to provide input on this study. This chapter describes the public and agency involvement that occurred throughout the study process and the comments and input received. In addition to the information presented in this chapter, material related to the public and agency involvement process is included in separate reports documenting the public meeting in each county: 1) *Reconstruction of KY 61 Meeting Notebook, Adair County High School, Columbia, December 7, 2000* and 2) *Reconstruction of KY 61 Meeting Notebook, Green County Middle School, Greensburg, December 14, 2000*.

A. Project Team Meeting

A project team meeting was conducted on Friday, September 8, 2000. The purpose of the meeting was to discuss the purpose and goals of the proposed project, to review preliminary existing condition data for the study corridor, and to identify future study needs. A copy of the meeting minutes is included in **Appendix D**. Information and insight given by those present at the meeting are as follows:

- The identified goals for the project were summarized as follows: improve safety along the route; provide an improved facility for truck traffic; and improve the geometric qualities of the roadway.
- In addition to the list of potential agency contacts provided by the KYTC, a number of other local contacts were identified. Potential contacts include the Greensburg Industrial Foundation, the Columbia Industrial Foundation, school boards, emergency services, and the Corps of Engineers.
- A number of problems along the existing KY 61 corridor were identified. These include: unsafe intersections at both ends of the corridor; vertical and horizontal curves with poor sight distance along portions of the route; safety concerns related to accident frequency; and truck access and weight limit issues along the corridor.
- Probable design criteria for the proposed improvement include the following: functional classification as a rural minor arterial; design speed of 60 mph; and the typical section is to be based on future traffic projections (probably two (2) lanes initially with truck-climbing lanes).
- The environmental footprint area was determined to include an area that is at least: 1000-feet east of KY 55; 1000-feet west of KY 61 from Greensburg to the Louie B. Nunn (Cumberland) Parkway; and 1000-feet north of Greensburg. (Please note that in discussions following the September 8, 2000, project team meeting, it was determined that a connector to KY 55 would not be necessary since the Columbia Bypass will provide a new interchange with the Louie B. Nunn Parkway. Therefore, the project maps were not expanded to include the entire KY 55 corridor.)
- A number of potential alternatives were identified during the District meeting. The majority of the discussion focused on the possibility of two (2) corridors: North of Greensburg to KY 55 near the Green River Lake; and South of Greensburg to KY 55 at the Adair-Green County Line. Several other potential corridors were identified and drawn onto a large map during the meeting.

- The discussion of logical termini focused on the possibility of connecting the KY 61 corridor into KY 55 at some point north of Columbia. Under this plan, the northern terminus could remain at the existing intersection with US 68, or fall just north of the Greensburg limits on US 68. It was indicated that both the US 68 and KY 55 corridors have been recently rebuilt and would provide adequate routes for additional KY 61 traffic. Bringing traffic into Columbia on KY 55 would also avoid the awkward intersection of KY 61 and US 68. Another possibility identified for a southern terminus involves moving the existing KY 61 and US 68 interchange about ½ mile to the west. This way, the current elevation change at the intersection could be eliminated.
- Additional information needed for this study included the future traffic projections for the identification of an expected typical section.

B. Local Officials and Groups Meetings

As part of the public involvement segment of this study, two (2) meetings were held, one (1) with local officials and one (1) with local interest groups in Columbia, Kentucky. These meetings were held on November 2, 2000. Minutes of these meetings are located in **Appendix E**. A Kentucky Transportation Cabinet representative conducted each meeting with assistance from the consultant team. The study process and purpose was presented along with preliminary project data. In addition, project issues including existing conditions and project purpose and goals were considered. Issues discussed during the public officials meeting included:

- If the KY 61 corridor is reconstructed on new alignment and the existing roadway is also maintained, maintenance funds will be required for both routes. If the KY 61 corridor is reconstructed along the existing alignment, maintenance funds will be required for only one roadway.
- Green County has minimal AAA and National Truck Network access: a short section of US 68 (milepoint 16.628 to 18.411) is included in the National Truck Network, US 68 is classified as a AAA route throughout the county, and a portion of KY 936 (milepoint 0.0 to 1.626) is classified as a AAA route. This type of access is critical to maintain and attract industry to the county.
- It is expected that the public will support reconstruction of the route in order to increase economic development opportunities in the area.
- This project has been discussed for many years in this area and should not come as a surprise to the public.

Issues discussed during the local interest group meeting included the following:

- Preliminary goals established for the project are appropriate.
- The historical integrity of the roadway should be preserved through context-sensitive design. Greensburg is currently participating in the Governor's Renaissance Program and would like to maintain this theme.
- The Jane Todd Crawford Trail is another historical area that should be considered during the analysis.
- Bicycle facilities should be integrated into the roadway design to promote tourism and maintain the historical characteristic of the corridor.

- Accidents along the KY 61 corridor (between milepoints 6 and 7) are often due to speeding and drag racing.
- The road must be widened to provide access and safe travel for large trucks. School buses and trucks typically have a difficult time passing each other along most of the route.
- It was noted that this project has been in and out of the Six Year Highway Plan since 1969 and that the public is ready for the improvements to be made.

C. Early Public Information Meeting

On Thursday, December 7, 2000 a Public Information Meeting was held in the cafeteria of the Adair County High School in Columbia, Kentucky for citizens in Adair County. One (1) week later on December 14, 2000, a Public Information Meeting was held at the Green County Middle School in Greensburg, Kentucky for Green County residents. Minutes for these meetings are located in **Appendix F** of this document.

These meetings were designed to inform the public and solicit questions and comments regarding the construction of proposed improvements to KY 61. A total of 45 persons attended the meeting in Columbia and 64 persons attended the information meeting in Greensburg. After sign-in, handouts were made available to all in attendance. These handouts provided information concerning the overall project development process, a project timeline, current status of the project, project purpose and goals.

At each meeting a formal presentation was given by a KYTC representative. Following the presentation, the public was invited to examine exhibits that had been set up in four (4) information/discussion stations. In this forum, questions could be addressed and comments expressed to KYTC and the consultant staff. Comments were recorded, and from these comments, the following citizen concerns were identified:

- A cave having a potential brown bat community is located about 2 miles south of Greensburg on the west side of KY 61 and another cave is located along KY 565 about 0.5 miles south of the KY 61/KY 565 intersection.
- There is frequently a flooding problem at the junction of Caney Creek and KY 61.
- Many heavy trucks exceed the speed limit on the south side of the rock quarry.
- There is a need for increased signage to warn of flood-prone areas and dangerous curve problems along KY 61.
- A number of visibility problems exist along the corridor, including the bridge over Caney Fork, the intersection of KY 61 and Temperance Road, KY 61 at Russell Creek Road, KY 61 at Doe Run Road and KY 61 at Udell-Shirley Road.
- The bridges over Caney Fork and Clover Lick Creek are in need of improvement.
- Consideration should be given to the cemetery located at the junction of US 68 and KY 61.
- Relocation of the roadway would affect store owners along the existing route.
- Improvements are needed to promote commerce and industry as well as improve safety along the route.
- There is a need for KY 61 to bypass the town of Columbia, Kentucky.

The general opinion of most persons attending these meetings appeared to indicate support for some level of improvement to KY 61; however, there were mixed opinions as to the level of improvement needed.

As part of the information handout, a survey questionnaire provided by the Kentucky Transportation Cabinet was provided for public input. Twenty-seven people responded to this survey and these respondents had the following comments on the project:

- Eighteen respondents were aware of the project and the majority (22) saw the proposed improvements as a benefit to Columbia and Adair County. In addition, the majority (26) saw the improved corridor as a benefit to Greensburg and Green County. In each case, only one (1) individual saw no benefit.
- When asked what areas of the corridor they considered difficult to improve, the responses were: the area between KY 565 to 1 mile beyond Caney Fork bridge, areas with older homes and barns built close to the right of way, areas with sharp curves, around Greensburg, and the tie in with the Louie B. Nunn (Cumberland) Parkway.
- When asked about areas to avoid, the response was to avoid cemeteries, churches and the Jane Todd Crawford historic homesite.
- Several suggestions were given regarding where the improvements should begin in Columbia: the Louie B. Nunn (Cumberland) Parkway; the Downey Saw Mill in Columbia; the proposed Columbia Bypass; the junction of KY 61 with KY 439; and the junction of KY 61 with Burkesville Road.
- Several suggestions were made as to where the improved corridor should end at Greensburg: the KY 61/US 68 intersection; US 68 north of town; the courthouse in town; the Larue County line; the Lincoln Parkway; the city limits; the end of the new bridge near Green River; and the Russell Creek bridge.
- A number of concerns about the project were also noted: lack of funding for the improvements; lack of need for the project; land procurement for right-of-way needs; need for the project to attract industry; and a feeling that this project may stay in the talking stage and not be constructed soon enough.
- Other special needs were thought to be important including wider shoulders, the addition of passing lanes, the ability to handle large trucks, the need for a new bridge, and improved drainage.
- One (1) survey form stated that the traffic volumes had been greatly exaggerated.

D. Resource Agency Coordination

Many local, state and federal resource agencies, with diverse areas of public responsibility, were included in this planning process. Input was solicited through written requests. Each agency was sent a copy of the project purpose and goals statement, as well as existing traffic, accident, and environmental footprint maps. This section describes the input received from responding organizations. The remainder of recipients did not have a response. Response letters from various resource agencies are located in **Appendix G**.

The following agency responded that they had no comment regarding the project:

- Michael L. Hill, Director, Kentucky Division of Multimodal Programs – Because the project area is not within or adjacent to a Metropolitan Planning Organization (MPO)

or a Small Urban Area (SUA), the Division does not have any comment regarding the project.

The following four (4) agencies responded that they saw no adverse impacts regarding the project:

- Edward A. Terry, Jr., Senior Transportation Advisor, Appalachian Regional Commission – The proposed project will not have an adverse effect on the Appalachian Development Highway System.
- Allen D. Rose, Secretary, Kentucky Cabinet for Workforce Development – The proposed project does not affect the Cabinet and its agencies at this time.
- David G. Huizenga, Deputy Assistant Secretary for Integration and Disposition, United States Department of Energy – The proposed project is not expected to impact the Department's shipments of materials in the area and they have identified no other concerns at this time.
- John Milchick, Jr., Kentucky State Coordinator, United States Department of Housing and Urban Development – The proposed project does not pose any obvious negative impact on HUD programs or constituency at this time. Please inform them for further consideration of alternative improvements as the project progresses.

The following 17 agencies offered comments on the proposed project:

- Curtis Hardwick, Mayor, City of Columbia – The project is needed for our area and would have a positive impact on industrial development and address safety concerns along the route. Environmental issues should be properly addressed. Adverse impacts to any group of people are not expected.
- Marla T. Barbour, Fisheries Biologist III, for Commissioner Thomas C. Bennett, Kentucky Department of Fish and Wildlife Resources – According to the Kentucky Fish and Wildlife Information System, no federally threatened or endangered fish and wildlife are known to occur in the project area. Eight (8) recommendations are provided to reduce potential negative impacts to aquatic resources in the project area. They do not anticipate any significant impacts at this time.
- Alex Barber, State Environmental Review Officer, Kentucky Department for Environmental Protection – This letter lists 16 Kentucky State Agencies which were provided project materials for review by Mr. Barber's office. Six (6) of these agencies provided comments related to the project which are summarized in this section. Four (4) of these agencies indicated that they did not have any comments at this time regarding the project, including the Division of Forestry, the Department of Surface Mining Reclamation & Enforcement, the Department of Parks and the Department for Military Affairs. The remaining six (6) agencies did not provide a response.
- James L. Roe, Permit Support Section, Kentucky Division for Air Quality – No requirement for issuance of an air quality permit if construction and operation are conducted in compliance with regulations. Primary concern would be Fugitive Emissions during earthmoving and construction. An attachment was included regarding restrictions on open burning and regulations on asbestos removal. Proper demolition and disposal of prior construction must be conducted in accordance with asbestos abatement regulations. Disposal of materials through the use of fire must be conducted in accordance with open burning regulations.
- Robert Daniell, Kentucky Division for Waste Management – All solid waste generated by this project should be disposed at a permitted facility. Old regulated

and non-regulated underground storage tanks and contamination encountered must be properly reported and remediated.

- Timothy Kuryla, Kentucky Dept. For Environmental Protection, Division of Water – Advises of the need to consult with the US Army Corps of Engineers to ascertain if a water quality certification or dredge of fill material permits are required. Notice given that the Division of Water may require mitigation for stream loss and wetland loss. Other guidelines are given regarding aquatic habitats, sedimentation, sinkholes, wellheads, and wastewater. Deep road cuts can act as "French" drains. These cuts could drain aquifers that are used as domestic and public water supply sources. Highway design needs to take into account the location of these aquifers. The Division of Water maintains data on wells drilled since 1985 and of all wells it inspects.
- Stephen A. Coleman, Director, Kentucky Division of Conservation – There are no agricultural districts within or adjacent to the project area; however, they would like to see the issue of loss of Prime Farmland and Farmland of Statewide Importance addressed in the study. Controlling erosion and sedimentation should also be considered during and after earth-disturbing activities once the project begins by use of best management practices for construction activities.
- John L. Mettille, Jr., Director, Kentucky Division of Environmental Analysis – Air quality status will not likely be a problem, the project is located outside of the area requiring conformity. The design phase of this project should address a number of potential impacts including: streams, prehistoric archaeological sites, HAZMAT storage tanks, abandoned oil wells, historic sites, and high number of relocations. Potential section 4(f) and 106 issues exist. There are several national register sites including an historic bridge and a cemetery.
- Jim Stone, Director, Kentucky Division of Materials – Geology and soils in project area were identified, some limestone units in the area have some sinkholes, cave systems and a variable rock line. The project alignment should minimize contact with limestones and not all sections may have sufficient rock available for highway uses. Soil depths greater than 10 feet are anticipated. Geologic maps of the project area were also provided.
- Sue Perkins, Branch Manager, Kentucky Division of Traffic, Permits Branch – Access along the new facility should be partially controlled, with access points set in accordance with 603 KAR 5:120 and access control fence installed within the project. New deeds should be executed for all adjoining property owners to identify the access control. The design speed should be the same as the anticipated posted speed for the new facility.
- Brainard Palmer-Ball, Jr., Kentucky State Nature Preserves Commission – This project could be impacted by several rare species documented to occur within the project area. These include the Gray bat and several rare aquatic species in Russell Creek including Kentucky Creekshell.
- James P. Fenton, Director, Office of State Archaeologist – Archaeological investigations should be conducted to determine if significant archaeological sites will be impacted by the proposed alternatives that will result in land modification.
- Pam Loeffler, United States Army Corps of Engineers District, Louisville – Notes that insufficient data regarding the proposed corridor precludes their ability to determine

at this point whether permits are required for stream crossings and wetlands. Suggests submitting data in the form of a formal permit application.

- Roger K. Wiebusch, Bridge Administrator, United States Coast Guard – Because this project does not cross waterways over which the Coast Guard exercises jurisdiction for bridge administration purposes, a Coast Guard bridge permit is not required.
- Michael L. Thompson, Program Manager, United States Federal Aviation Administration – The Columbia-Adair County Airport appears to be located approximately 2600 feet from the proposed project. The instructions provided on FAA Form 7460-1, "Notice of Proposed Construction or Alteration," should be reviewed to see if there is a need to formally notify the FAA of the project.
- Lee A. Barclay, Field Supervisor, United States Fish and Wildlife Service – Highway projects frequently accelerate erosion and sedimentation in streams. Guidelines for controlling sedimentation and soil erosion through Best Management Practices were provided. Endangered species collection records do not indicate that federally listed endangered or threatened species occur within the project area.

IV. ENVIRONMENTAL OVERVIEW

A. Environmental Footprint

As part of this project, an environmental footprint was developed. A local area Geographic Information System (GIS) was assembled for the defined study area, with relevant environmental data collected from numerous sources including federal and state databases as well as existing in-house data (see **Appendix H** for data resource information). This data was then geo-referenced as needed using the GIS developed for the project. This preliminary environmental analysis identified potential issues and concerns within the defined study area.

The study identified environmental issues that are likely to require consideration during the planning stage for the proposed transportation improvements. **Figures 12 and 13** in **Appendix A** show environmental features identified within the study area. The same environmental information is overlaid on a digital orthophotograph in **Figures 14 and 15**. These environmental issues are considered in eight (8) analytical categories discussed below: 1) culturally-sensitive locations; 2) EPA monitored sites; 3) geologic concerns; 4) historic structures and archaeology sites; 5) hydrology; 6) managed land areas; 7) threatened and endangered species; and, 8) other environmental concerns. These issues are likely to require consideration for any environmental assessment.

1. Culturally-Sensitive Locations

There are eleven culturally sensitive locations within the KY 61 study area. There are four (4) churches, two (2) schools, four (4) cemeteries and one (1) airport. The USGS topographic map for the study area also indicates that the Pinewood Country Club is located within the study area.

2. EPA Monitored Sites

The EPA monitors several facilities in both Adair and Green Counties. Some of these facilities that are near the project area are shown in **Figure 16**. Of these sites, 64 are within the KY 61 study area. The facilities consist of seven (7) FINDS (Facility Identification and Initiative System) locations, four (4) ERNS (Emergency Response Notification System) features, two (2) RCRIS (Resource Conservation and Recovery Information System) sites, three (3) AIFS-AIRS (Aeromatic Information and Retrieval System) locations, two (2) Permitted Landfill features, and 46 UST (Underground Storage Tank) sites.

3. Geologic Concerns

Of the several Geologic Concerns reviewed, 60 wells and one (1) water gauge were located within the project area. Of the 60 wells, 38 were Hydrocarbon exploration wells (32 were labeled as “drilled and abandoned,” three (3) wells were labeled as “stripper wells,” and three (3) were labeled as “gas wells”). Twenty-two more are listed as water wells. The study area also includes a rock quarry.

4. Historic Structures and Archaeological Sites

There are 23 Historical Structures and eight (8) Archaeological sites within the identified study area. Of the 23 Historical Structures, two (2) are listed on the National Register of Historic Places. They are the Groves-Cabell House (circa 1850-

1874) and the John Field House (circa 1800-1834). One (1) of the Archaeological sites is recorded as a National Register Listed Property.

5. Hydrology

An examination for hydrological concerns revealed ten streams, 100 wetlands, and the Pinewood Country Club Lake Dam present within the study area.

There are approximately 45.4 miles of the blue-line streams present within the study area. The following is the breakdown by stream:

- Russell Creek (14.8 miles)
- Pettys Fork (12.0 miles)
- Blue Springs Branch (4.2 miles)
- Clover Lick Creek (3.8 miles)
- Casey Fork (2.0 miles)
- Butlers Fork (1.7 miles)
- Sulphur Spring Branch (1.7 miles)
- Mill Creek (1.3 miles)
- Morrison Branch (0.3 miles)
- No Name (3.6 miles)

The identified wetland areas within the study area consist of approximately 73.9 acres of Palustrine (Shallow Water Habitat) and Riverine (Flowing water) wetlands.

6. Managed Land Areas

There are no managed land areas within the KY 61 study area.

7. Threatened and Endangered Species

The Kentucky State Nature Preserves Commission monitors a number of species in Adair and Green Counties. Several of these have been determined, under the Endangered Species Act of 1973 and the Kentucky Rare Plant Recognition Act, as being threatened or endangered and are closely monitored. These include:

- Bivalve (Elktoe, Fanshell, Northern Riffleshell, Clubshell, Rough Pigtoe, Rabbitsfoot, Purple Lilliput, Kentucky Creekshell);
- Fish (Western Sand Darter, Spotted Darter, Mountain Brook Lamprey, American Brook Lamprey, Longhead Darter);
- Mammal (Rafinesque's Big-Eared Bat, Gray Myotis, Indiana Myotis); and,
- Reptile (Alligator Snapping Turtle)

Given that the environment of the study area is similar to that for the entirety of Adair and Green Counties, these species may occur within the study area.

8. Other Environmental Concerns

Two (2) Tennessee Gas Pipeline Company pipelines traverse the study area in a northeast to southwest orientation. The location of these lines should be considered during future phases of this project to assure that damage to the lines or leakage does not occur.

According to the Kentucky Division of Environmental Analysis, air quality status will not likely be a problem, as the project is located outside of the area requiring conformity.

Future phases of this project should identify noise receptors within range of the proposed corridor for further study and analysis.

In summary, a number of environmental issues should be considered as this study moves into future phases. The potential impacts of the proposed study area include historical sites, water quality, the presence of EPA monitored facilities, and possible threatened and endangered species:

- Section 106 of the National Historic Preservation Act may also be applicable to this project because of the presence of the Groves-Cabell House (circa 1850-1874) and the John Field House (circa 1800-1834). Both are currently listed on the National Register of Historical Places and further study may be deemed necessary to determine the potential impacts of the proposed project on the two properties.
- The need to address water quality issues is based on the possible destruction of any hydrocarbon exploration wells and the resulting potential for contamination from subsurface zones containing hydrocarbons and/or brackish water. Construction activities in and around these features may impact water quality.
- There are no known Section 4(f) issues within the study area.

B. Environmental Justice

An important consideration for highway reconstruction or new construction is environmental justice. For this study, environmental justice is addressed by calculating the percentage of minorities, low-income persons, and persons aged 65 and older along the project corridor. This information was gathered from 1990 U.S. Census tract and block level population counts, local elected officials, local residents, community leaders, and the Lake Cumberland Area Development District. The data used in this analysis is located in **Appendix I**. A summary of the environmental justice data is shown in **Table 5** in **Appendix B**.

1. Race

Adair County's population is 3.3 percent minority. This is less than half that of the State's 7.9 percent. All of the affected tracts have percentages less than or near the county percentages. The only block group that is higher than the county percentage is 970400-3 with 7.7 percent. However, this still does not exceed the state percentage.

Green County's population is 3.7 percent minority. The affected tracts' and block groups' populations are made up of 4.4 to 6.9 percent minorities. While these percentages are less than the state percentage, they are all higher than the county as a whole.

2. Income

In Kentucky 18.5 percent of the population is in poverty, while Adair County has 24.6 percent in poverty. Of the three (3) affected tracts in Adair County, only tract 970500 has a higher percentage of people in poverty than Kentucky and Adair County as a whole. More than 33 percent of this tract's population is in poverty. Likewise, the

only block group that has a substantially higher percentage is within this tract. More than 38 percent of block group 970500-2's population is in poverty.

Twenty-one percent of Green County's population is at or below poverty. Only one (1) tract and one (1) block group within the county's project area have percentages that are higher than the state and county as a whole. Tract 990200 and block group 990200-2 have percentages of persons in poverty of 22.5 percent and 26.5 percent respectively.

3. Age

In Adair County, the percentage of people age 65 or older within the project area tracts ranges from 13.4 to 18.1 percent, which is generally higher than the statewide and county percentages. In comparison, people 65 and older are 12.7 percent of Kentucky's population, and 15.7 percent of Adair County's total population. The study area block groups are similar in range, with values of 14.4 to 19.1 percent, respectively.

In Green County, 17.9 percent of the population is aged 65 or older. The two (2) affected tracts within Green County have considerably higher percentages of population 65 and older as compared to the state and county percentages. The tract values are 21.2 percent and 26.1 percent. The affected block groups are also higher than state and county levels, having 18.0 percent and 21.1 percent, respectively.

In summary, environmental justice issues related to minorities, low-income populations, and persons aged 65 and older should be closely monitored throughout future phases of this project due to higher percentages of these groups in the study area than for Adair County, Green County, and/or Kentucky:

- Two (2) of the six (6) project area census tracts have a higher percentage of minorities (3.8 to 5.4 percent) than Adair County (3.3 percent). Three (3) of the four (4) tracts in Green County have a higher percentage of minorities (4.4 to 6.5 percent) than the county (3.7 percent).
- Four (4) of the six (6) project area census tracts have a higher percentage of low-income persons (28.8 to 33.1 percent) than Adair County (24.4 percent) and Kentucky (18.5 percent). Two (2) of the four (4) tracts in Green County have a higher percentage of low-income persons (22.5 to 23.0 percent) than the county (21.1 percent) and Kentucky (18.5 percent).
- Five (5) of the six (6) tracts have a higher percentage of persons aged 65 and older (13.4 to 18.1 percent) than Kentucky (12.7 percent). Two (2) of the four (4) tracts in Green County have a higher percentage of persons aged 65 and older (21.2 to 26.1 percent) than the county (17.9 percent) and Kentucky (12.7 percent).

V. TERMINI AND LENGTH

The project is defined in the *Six Year Highway Plan* as a scoping study (Item No. 04-128.00) and reconstruction of a priority section (Item No. 04-128.10) of KY 61 along a 19-mile segment between Greensburg and Columbia. Within these parameters, several variations of terminal points are available for consideration on both the north and south ends of the project.

On the south end near Columbia, the route would terminate at the new Columbia Bypass that is currently under design. The intersection with the Columbia Bypass would likely be relocated approximately ¼ to ½ mile to the south. Additionally, it was proposed that a second southern terminus be considered along KY 61 just north of the Louie B. Nunn (Cumberland) Parkway. This terminus would provide an additional leg for the study corridor that would improve connectivity to the Louie B. Nunn (Cumberland) Parkway.

On the north end near Greensburg, the route would terminate at US 68 south of Greensburg. Local officials have noted plans for an eastern bypass around the city that could provide a connection to KY 61. As this project was still in the advanced planning stage, it was determined that the terminus of KY 61 at US 68 would be desirable. A possibility identified for future design considerations would involve moving the existing KY 61 and US 68 interchange about ⅛ to ¼ mile to the west. In this way, the current elevation change at the intersection could be improved.

Finally, during early public involvement sessions, local officials proposed the possibility of connecting the KY 61 corridor into KY 55. Under this plan, the northern terminus could remain at the existing intersection with US 68, or fall just north of the Greensburg limits on US 68. It was indicated that both the US 68 and KY 55 corridors have been recently rebuilt and could provide alternate routes for additional KY 61 traffic. After further discussion with local officials and KYTC staff, it was determined that the use of KY 55 would not be a viable alternative to improvements along KY 61.

VI. DRAFT PROJECT GOALS

As a result of this planning process, project goals have been identified for the proposed KY 61 improvements. These goals are to address safety concerns along the existing route, improve the geometric qualities of the roadway and to facilitate truck travel along the route by providing a National Truck Network or a 'AAA' 80,000 lb. gross vehicle weight highway facility.

For the KY 61 project, the following goals and objectives were identified:

- Improve Safety by Improving the Geometric Qualities of the Route – Analysis of historical accident data indicates a number of accident locations along KY 61, with several segments or spots along the highway designated as high accident locations or potential high accident locations due to the frequency of accidents. Within the study area, one high accident segment was identified along KY 61 in Adair County from milepoint 12.879 to milepoint 14.252. A number of high accident spot locations were identified along KY 61 in the study area. High accident spots, in the project area, were identified in six (6) locations in Adair County and in three (3) locations in Green County. During a 4-year period, there were six (6) fatal, 79 injury, 112 property damage only and 197 total accidents along the KY 61 study corridor. Local officials and public citizens expressed their concerns with these safety problems during meetings throughout the course of this study.

  Along the study portion of the route, between KY 80 in Adair County and US 68 in Green County, 100 percent of lane widths are relatively narrow, ranging from nine (9) to 10 feet along unimproved portions of the highway. Similarly, shoulder widths are also narrow, with Green County shoulders only one (1) foot in width with drop-offs at the edge of shoulder. Shoulders are four (4) feet in width throughout Adair County; however, the paved widths of these shoulders may be less than four (4) feet. Horizontal and vertical alignments along the route are also a problem, with sharp curves and limited sight distance in some sections. For a design speed of 60 mph, horizontal curvature should remain below about 4.75 degrees. Within the study section of KY 61, about 20% of the route has horizontal curvature above 4.75 degrees. Maximum limits for grades depend on sight distance, terrain and other geometric factors; however, a maximum of about 6.0 percent is a general standard for similar roadways in this area. Within the study section of KY 61, about 10% of the route has grades above 6.0 percent. The less than desirable geometric conditions of the roadway may be a potential factor in some of the accident problems noted above.

- Provide an Improved Facility for Truck Traffic – As discussed in the previous paragraph, lane and shoulder widths along the KY 61 route are generally narrow. Due to the increased dimensions of large trucks, such geometric characteristics often create difficult maneuvers for trucks operating along the roadway. Local officials and citizens indicated that many trucks operate illegally (based upon size restrictions) along the road.

- Provide a National Truck Network or AAA Weight Classification Highway – Local officials, particularly from Greensburg, emphasized the need to improve the truck weight classification of KY 61. Greensburg currently does not have access to the National Truck Network, which would permit trucks with increased dimensions and

with 80,000 lbs gross vehicle weight to reach their area. All the bridges along the route are AAA rated for weight, but two (2) Green County bridges (B00008 and B00009) do not meet NN standards for width. Bridge attributes are not the only criterion for AAA or NN routes, as roadway geometry must also conform to certain standards to meet AAA and NN route requirements. It was strongly desired by local officials that the highway be upgraded to National Truck Network standards.

VII. RECOMMENDATIONS

A. Geometric Features

The geometric criteria recommended for the proposed relocation should provide consistency with the reconstruction of KY 61 south to the Tennessee State Line. As shown in **Figure 17** in **Appendix A**, the typical section should generally consist of two (2) lanes. A two-lane facility is expected to be adequate for future traffic volumes.

B. Alternative Corridors

Through the course of this study, four (4) alternatives have been identified for the improvement of KY 61. Variations of these "build" corridors were identified and discussed at meetings involving KYTC team members, local officials, interest groups and the general public. The four (4) corridors under consideration (Alternates 1, 2, 3 and 4) are identified in **Figures 18, 19, 20** and **21** respectively. Alternates 2, 3 and 4 are generalized 2000-foot strips. Alternate 1 is spot improvements. On the northern end, each of the four (4) corridors would likely terminate at the existing intersection of US 68 and KY 61. On the southern end, each of the identified alternates would likely tie into a proposed western bypass of Columbia. Alternate 4 would also include a connection to the proposed KY 61 interchange with the Louie B. Nunn (Cumberland) Parkway. The corridor alternates are generally defined as follows:

- Alternative 1 – This alternative is illustrated in **Figure 18** and provides for spot-improvements along approximately 7.4 miles of the existing KY 61 corridor between Columbia and Greensburg. Spot improvement locations were chosen through site visits, consideration of accident history, identification of the most deficient sight distance sections, discussion with local users of the route, and concerns expressed by local leaders and citizens. The locations were chosen to address many of the safety concerns along unimproved portions of the route by eliminating curves, improving sight distances, and realigning intersections. Improvements 3 and 6 in Green County correspond with high accident spot locations, as shown in **Figure 8**.

  Six (6) of the spot improvement sections are located in Green County and three (3) sections are located in Adair County. The improvements would provide for a design configuration with two (2) standard lanes and adequate shoulders. The spot improvement option would provide an improved roadway along 7.4 miles of the route; however, it would not upgrade the entire 16.9-mile study section to National Truck Network standards set forth in the *Code of Federal Regulations, Title 23, Part 658*. This document states that a route should have "adequate geometrics to support safe operations, considering sight distance, severity and length of grades, pavement width, horizontal curvature, shoulder width, bridge clearances and load limits, traffic volumes and vehicle mix, and intersection geometry" and that the route "consists of lanes designed to be a width of 12 feet or more or is otherwise consistent with highway safety."

  For the spot improvement alternative (Alternative 1), portions of KY 61 will not meet the project goals of establishing a National Truck Network route along the project corridor or providing an improved facility for truck traffic. Alternative 1 would meet the project goal of increasing safety by improving some of the geometric qualities of the route.

- Alternative 2 – This alternative is illustrated in **Figure 19** and provides for minor widening with some realignment and curve corrections along the entire length of the existing KY 61 corridor between Columbia and Greensburg. This alternative would include the spot improvements identified in Alternative 1 and also include reconstruction and widening along the existing KY 61 alignment for the remaining sections of the highway.

  Alternative 2 includes improvements along the entire study section of KY 61, which will meet the National Truck Network standards. Alternative 2 is expected to meet all three goals established for this project.

- Alternative 3 – This alternative is illustrated in **Figure 20** and includes the realignment of the KY 61 corridor from the proposed Columbia bypass to US 68 in Greensburg. This option would relocate most portions of KY 61 to an alignment just south and west of the existing highway. Due to drainage and land use considerations, it was determined that a new alignment on the south and west sides of KY 61 was preferable to locations north and east of the existing roadway. Alternative 3 will meet all three goals established for this project.

- Alternate 4 – This alternative is illustrated in **Figure 21** and includes the alignment designated for Alternate 3 plus a link to a proposed KY 61 interchange with the Louie B. Nunn (Cumberland) Parkway southwest of Columbia. The need for this connection was discussed under Termini and Length, but would generally afford better connectivity for KY 61 traffic that is traveling to the Louie B. Nunn (Cumberland) Parkway or KY 61 south of the Louie B. Nunn (Cumberland) Parkway.

  Alternative 4 will meet all three goals established for this project. This alternative also improves the route to meet National Truck Network standards and connects to the Louie B. Nunn (Cumberland) Parkway for increased truck travel connectivity.

In addition to these corridors, several other corridor variations and options were considered including a major widening of the existing KY 61 route. Features adjacent to the study area, such as residential areas, streams and wetland areas, local businesses, and terrain characteristics, limit the practical corridor options to the four (4) preferred corridors described above.

C. Evaluation of Alternatives

The technical analysis of the four (4) corridor alternatives considered three (3) basic categories of criteria for evaluation, as discussed in the following sections. These categories included: traffic considerations, environmental issues and project costs. A tabular summary of the analysis results related to these areas of consideration is provided in **Table 6** in **Appendix B**.

1. Traffic Considerations

The existing and future traffic potentially served by each of the four (4) alternative corridors was considered in the comparative analysis. Using existing traffic data and future forecasts, the Average Annual Daily Traffic (AADT) along each of the corridors was estimated for the Years 2000 and 2025. Another measure used to compare the alternatives, Vehicle-Miles Traveled (VMT), considers the average traffic along each corridor, along with the length of the improved section. These measures are shown in tabular format in **Table 6** in **Appendix B** and summarized in the following section:

- The spot improvements offered under Alternative 1 are expected to serve the least number of vehicles. Year 2000 and Year 2025 daily volumes along the corridor are expected to reach about 2,120 vpd and 3,480 vpd, respectively.

Alternative	1	2	3	4
Year 2000 AADT	2,120	2,140	2,240	2,280
Year 2000 VMT	7,791	33,416	34,978	37,745
Year 2025 AADT	3,480	3,510	3,680	3,750
Year 2025 VMT	12,789	54,809	57,463	62,081

- Alternative 2 offers improved travel for about 2,140 vpd in Year 2000 and 3,510 vpd in Year 2025.
- Realignment of the corridor under Alternative 3 is expected to attract traffic to the route, serving about 2,240 vpd in Year 2000 and 3,680 vpd in Year 2025.
- With the connection to the Louie B. Nunn (Cumberland) Parkway, Alternative 4 provides improved travel for 2,280 vpd in Year 2000 and 3,750 vpd in Year 2025.

2. Environmental Issues

An environmental overview of each corridor was completed using Geographic Information System (GIS) databases and other technical resources. The overview of each of the four (4) corridor alternatives is intended to identify known issues within an approximately 1,000-foot buffer zone on each side of the highway. The number of known occurrences of environmental issues within each 1,000-foot buffer zone on each side of the highway is recorded in tabular form in **Table 6** in **Appendix B** and summarized in the following section:

- With the shortest length and spot improvements, Alternative 1 is expected to have the least environmental impact of the four (4) alternatives. The identified improvements typically involve minor realignments and curve corrections, placing improved sections fairly close to the existing corridor. For this reason, the features typical to a developed corridor may likely be impacted by these improvements. For example, about 420 houses and primary structures fall within the 1,000-foot buffer zone on each side of the highway along the 7.4 miles of spot improvements.
- Because it involves minor widening of the existing highway corridor, Alternative 2 is expected to have relatively few impacts to natural areas. Typical for a developed corridor, this alternative is expected to have greater impacts to cultural sites, water wells, structures, and developed land uses.

- Alternative 3 involves reconstruction of the corridor on mostly new alignment. For this reason, potential impacts to wetlands and natural areas are likely to be higher than Alternatives 1 and 2. On the other hand, fewer impacts are expected to cultural sites, historic structures, houses and primary structures.

Alternative	1	2	3	4
Cultural Sites	2	4	1	2
EPA Sites	25	41	28	28
Wells & Gauges	8	22	20	20
Historical & Archaeological Sites	5	7	6	11
Wetlands (acres)	13.0	17.7	17.3	19.5
Blue Line Streams (miles)	11.0	14.7	16.1	16.5
Dams	0	0	0	1
Houses & Structures	416	736	470	500
Antenna Structures	0	1	0	1

- Like Alternative 3, Alternative 4 involves realignment of the existing corridor, plus a 1.6-mile link to KY 61/KY 80 southwest of Columbia. Partially due to its length, this alternative's 1,000-foot buffer zone on each side of the highway contains the most wetlands, blue-line streams, and historical structures. However, Alternative 4 may potentially impact the fewest houses, primary structures and cultural sites.

3. Cost Estimates

Cost estimates for each alternative were calculated using past costs for similar highway projects in the study area and an evaluation of the terrain and other characteristics within the corridor. As shown in **Table 6** in **Appendix B**, cost components for design, right-of-way and utilities, bridges and construction were calculated based on these factors. **Table 7**, in **Appendix B**, shows a breakdown of these cost items by county.

- The Alternative 1 improvements have the lowest total project costs of $24.0 million of the four (4) alternatives. With a total improvement length of 7.4 miles, Alternative 1 has per-mile costs of $3.3 million.

Alternative	1	2	3	4
Total Cost (million $)	24.0	30.4	51.3	56.0
Per Mile Cost (million $)	3.3	1.9	3.3	3.3

- Alternative 2 has project costs of $30.4 million. Per-mile costs for this alternative are the lowest of the four (4) corridors considered at $1.9 million.
- The Alternative 3 improvements total $51.3 million with per-mile costs of $3.3 million.
- Alternative 4 has the longest length and the highest total project cost of $56.0 million. Per-mile costs for this alternate are the same as those for Alternatives 1 and 3 at $3.3 million.

The evaluation of these criteria and other project issues is summarized for each of the four (4) alternatives in the following chart. The items in the chart represent both the technical analysis performed as part of this study, as well as the agency and public input provided through involvement efforts. The rating system is intended to provide a

comparative analysis and conclusion for each of the listed criteria and each of the four (4) alternatives.

With respect to the corridors summarized in the preceding chart, it was noted that Alternatives 2, 3 and 4 meet all the goals identified for the project. Alternative 4's connection to the future Columbia bypass and the Louie B. Nunn (Cumberland) Parkway provides for reduced congestion in Columbia, improved traffic service in the area, and an improved truck route for the study area.

Alternatives 2, 3 and 4 serve to address the sentiments expressed by local officials and the public for improvements to upgrade the entire route and accommodate all of the safety and operational issues identified. These factors and the same per-mile costs for Alternatives 1, 3 and 4, serve to support Alternative 4 as the recommended corridor option.

The Design Phase for the priority section of the project addressed in this study is scheduled in the current Six Year Highway Plan for FY 2002 with committed funds of $750,000. Subsequent phases of project development, including Right-of-Way, Utility Relocation, and Construction have not been scheduled. Additional funds must be scheduled for subsequent sections and phases to make the recommended corridor option a reality.

Alternative	1	2	3	4
Project Goals*				
Improve geometric qualities of the route	0	1	2	2
Increase safety along the route	0	1	2	2
Provide an Improved Truck Facility	0	1	1	2
Provide a NN route into the study area	0	1	1	2
Other Project Considerations*				
Reduce congestion in downtown Columbia	0	0	1	2
Improved Traffic Service and Travel Time Savings	0	0	1	2
Minimize Environmental Impacts	1	0	0	0
Public Preference	0	1	1	1
Project Costs	1	2	0	0
Summary*				
Average Rating	0.3	0.9	1.1	1.6

* 0 — No Advantage; 1 — Slight Advantage; 2 — Major Advantage

D. Recommendations

As discussed in the previous section, a number of issues were considered in the selection of a recommended corridor for KY 61. Alternative 4 has been identified as the improvement that is expected to meet the most project goals and issues raised throughout the scoping study process. The recommended corridor is shown by phase and cost estimate in **Figure 22** in **Appendix A** and detailed in **Table 8** in **Appendix B** for programming purposes. As shown, four (4) major priority sections have been identified, beginning with the northernmost section between KY 487 and US 68 in Green County. With only $750,000 in design funds currently scheduled in the Six Year Highway Plan, additional funds will be necessary to begin future phases of the identified priority section.

Since the northern end of the corridor has high traffic volumes, high accident locations, and the most restrictive existing design conditions with 9-foot lanes and 1-foot shoulders,

the priority section is between KY 487 and US 68 near Greensburg in Green County. The second priority is to start at the Columbia Bypass and work north to the county line, then from there toward KY 487 in Green County for the third priority. The last priority is to complete the link between KY 61 and the Louie B. Nunn (Cumberland) Parkway. A more extensive environmental assessment should be completed for each priority section of the project. Due to funding issues, it is not feasible to recommend the Phase I Design for the entire study corridor at once, but the Environmental Assessment/Environmental Impact Statement should be completed with the first priority section for the entire corridor.

E. Special Considerations

A number of issues contributed to the study recommendations which should be considered as the project moves into future phases. Some of these issues include:

- Roadway flooding and pooling of water on adjacent properties after heavy rains along the north end of the project area would prevent major reconstruction along the existing route.
- A direct connection to the Louie B. Nunn (Cumberland) Parkway would be preferred, as it would keep more through-traffic out of Columbia. The proposed Columbia Bypass would also provide a connection between KY 61 and the Louie B. Nunn (Cumberland) Parkway, but it is expected to carry more local traffic than Alternative 4's direct connection between KY 61 and the Louie B. Nunn (Cumberland) Parkway.
- The facility should be partial control of access and the design speed at least equal to the posted speed of 55 mph.
- Establishing a National Truck Network route was the original goal of this project. Alternatives 3 and 4 would best meet this goal since they involve full reconstruction. Alternative 2 would also meet this goal since it involves widening of the existing route. Under Alternative 1, portions of KY 61 will remain unimproved and may not fully meet the project goal of establishing a National Truck Network route along the project corridor. Alternative 4, with its connection to the Louie B. Nunn (Cumberland) Parkway, best meets the goal of providing truck access into Greensburg. The proposed Columbia Bypass would also provide a connection between KY 61 and the Louie B. Nunn (Cumberland) Parkway, but it is expected to carry more local traffic than Alternative 4's direct connection between KY 61 and the Louie B. Nunn (Cumberland) Parkway.
- Based upon the cost estimates, the programming of additional funds will be required in order to complete the project development activities.
- Future project development tasks will consist of design for the KY 61 study priority segment. These activities will also include additional public involvement and are scheduled to begin later this year (FY 2002). Right-of-way acquisition, utility relocations and construction are not currently scheduled as part of the KYTC's Six Year Highway Plan.
- Other projects that should be considered throughout the development of this project are the Columbia and Greensburg Bypasses and improvements to KY 61 south of this project's study area.

F. Suggested Public Involvement Activities

Based upon the comments at the public information meetings and the responses from the public surveys, it appears that there is public support for this project. It is important to continue the public involvement effort throughout subsequent phases of this project. Activities that are recommended include:

- Create and implement a Public Involvement Plan that will keep the public informed on any decisions that are made.
- Hold other public information meetings so that the engineering and environmental issues can be made known to the public. These meetings should be held at the major milestones of the project.
- The local media should be contacted as key decisions are made relating to the project so that they can assist in making the public aware of those decisions.
- As the project continues to develop, the database of contacts developed by the KYTC Division of Planning can be expanded to include other identified stakeholders and interested parties.

VIII. ACKNOWLEDGEMENTS

A great deal of thanks goes to Sherrill Smith, Roger Coffey, Patty Dunaway, Paul Estes, Becky Judson, Cathi Blair, David Beattie, Greg Eastman, Jeffrey Womack, Charles Hale and the remainder of the staff from Districts 4 and 8 for their input and support during this project. Their assistance with setting up the initial team meeting, setting up the public information meetings, and assisting with the public information meetings was invaluable.

A thanks also goes to the Lake Cumberland Area Development District and Neal Cundiff for their assistance in setting up meetings with local officials and organizations and for their work on the environmental justice and community impact issues.

IX. CONTACTS

If additional information is needed regarding the KY 61 Scoping Study, the following individuals may be contacted:

- Annette Coffey, P.E. Director, Division of Planning
- Carl D. Dixon, P.E. Branch Manager, Division of Planning
- Ted Noe, P.E. Project Manager, Division of Planning

The following address and phone numbers can be used to reach these individuals.

Kentucky Transportation Cabinet
Division of Planning
125 Holmes Street
Frankfort, KY 40622
Phone: (502) 564-7183
FAX: (502) 564-2865

APPENDIX A.
FIGURES

LIST OF FIGURES

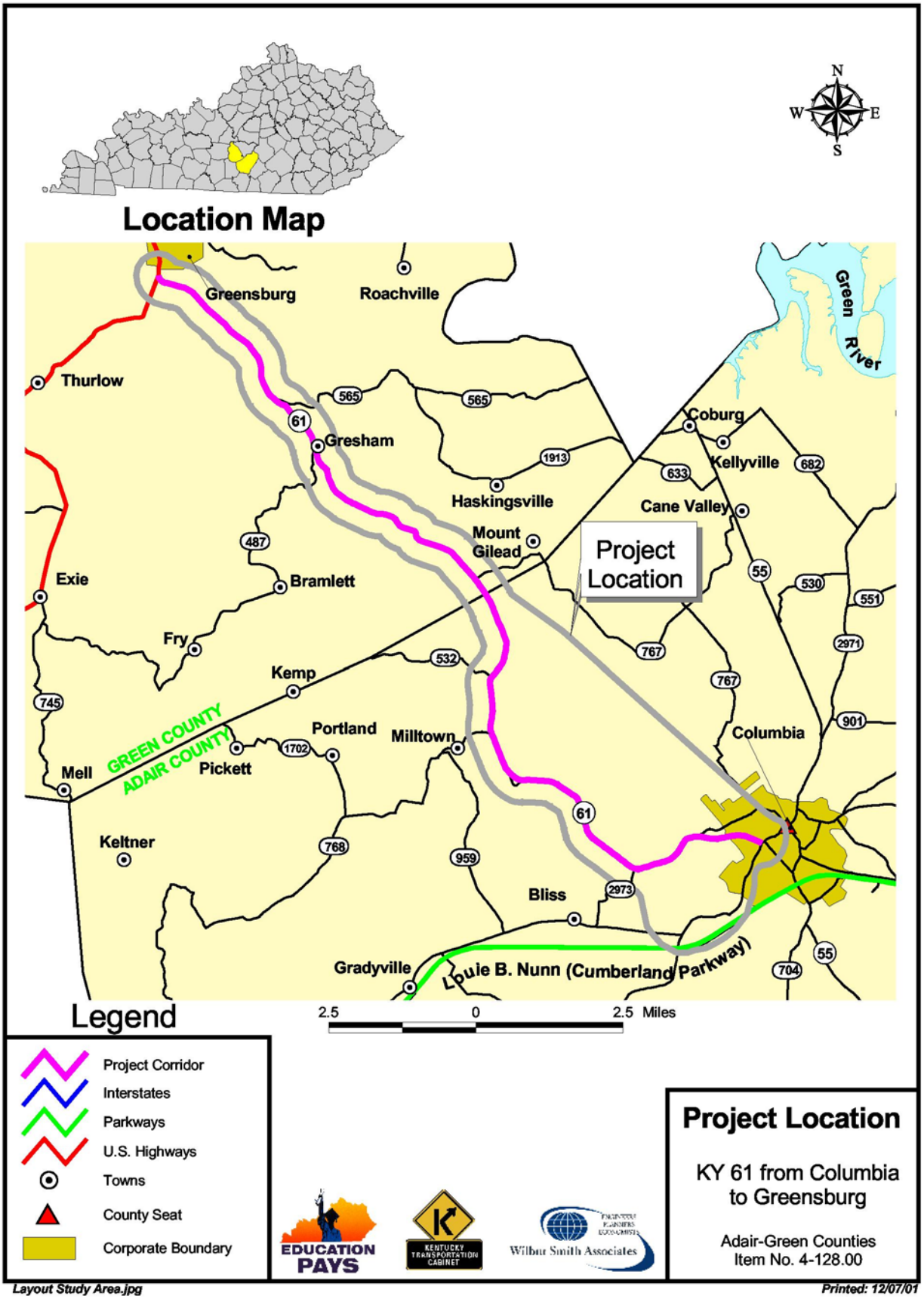


Figure 1. Project Location

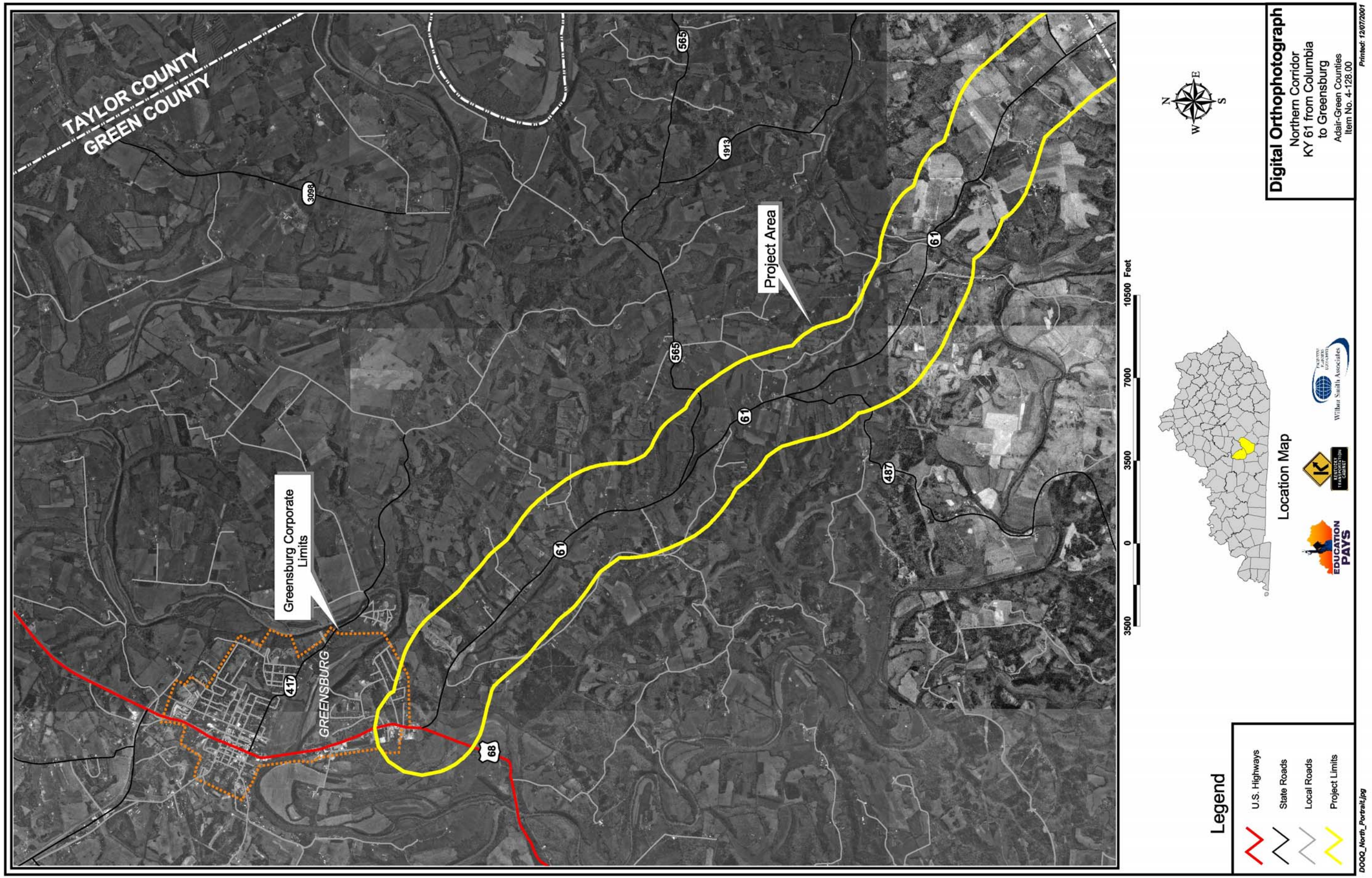


Figure 2.
Digital Orthophotograph – Northern Corridor

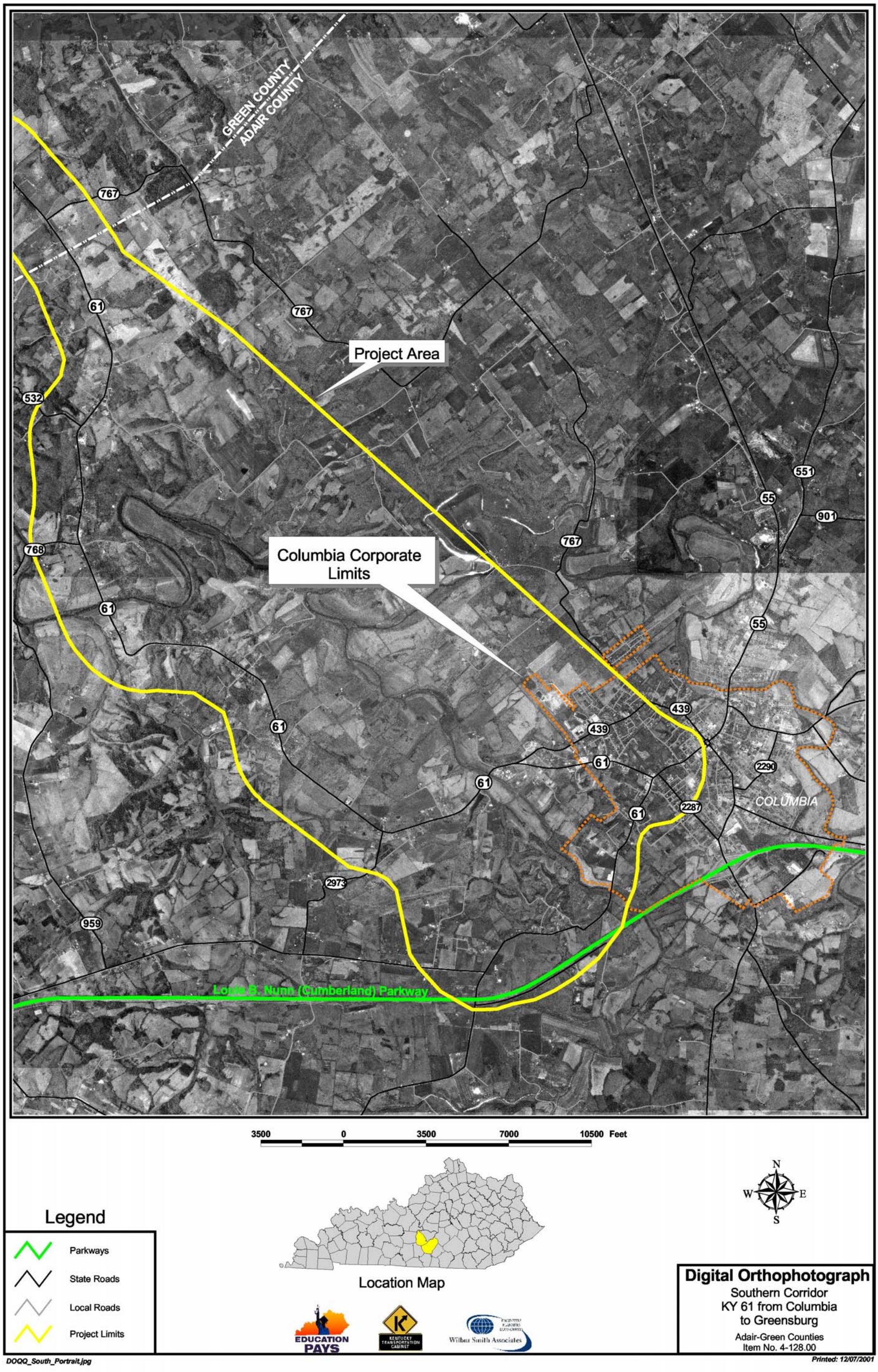


Figure 3.
Digital Orthophotograph – Southern Corridor

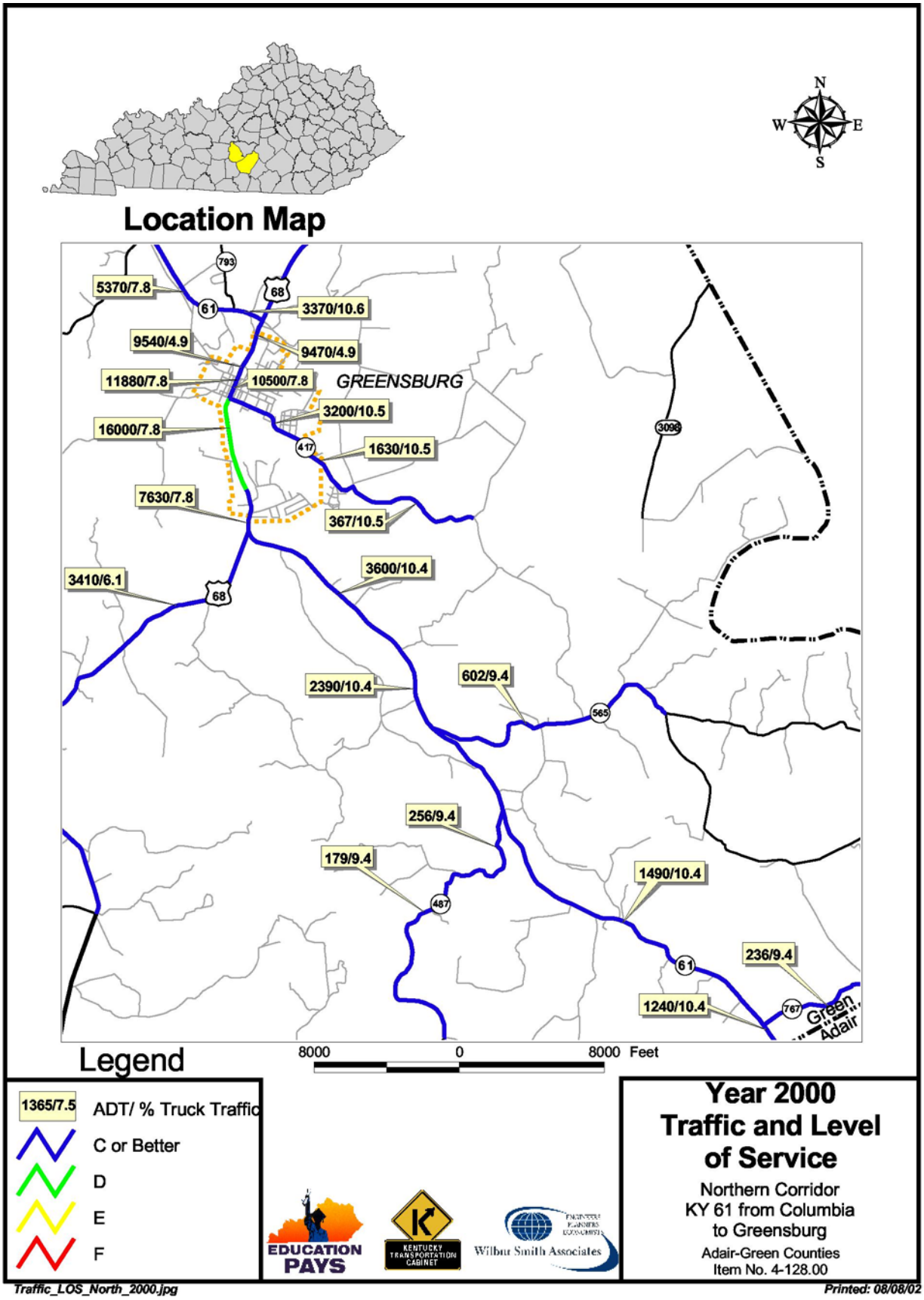


Figure 4. Year 2000 Traffic and Level of Service – Northern Corridor

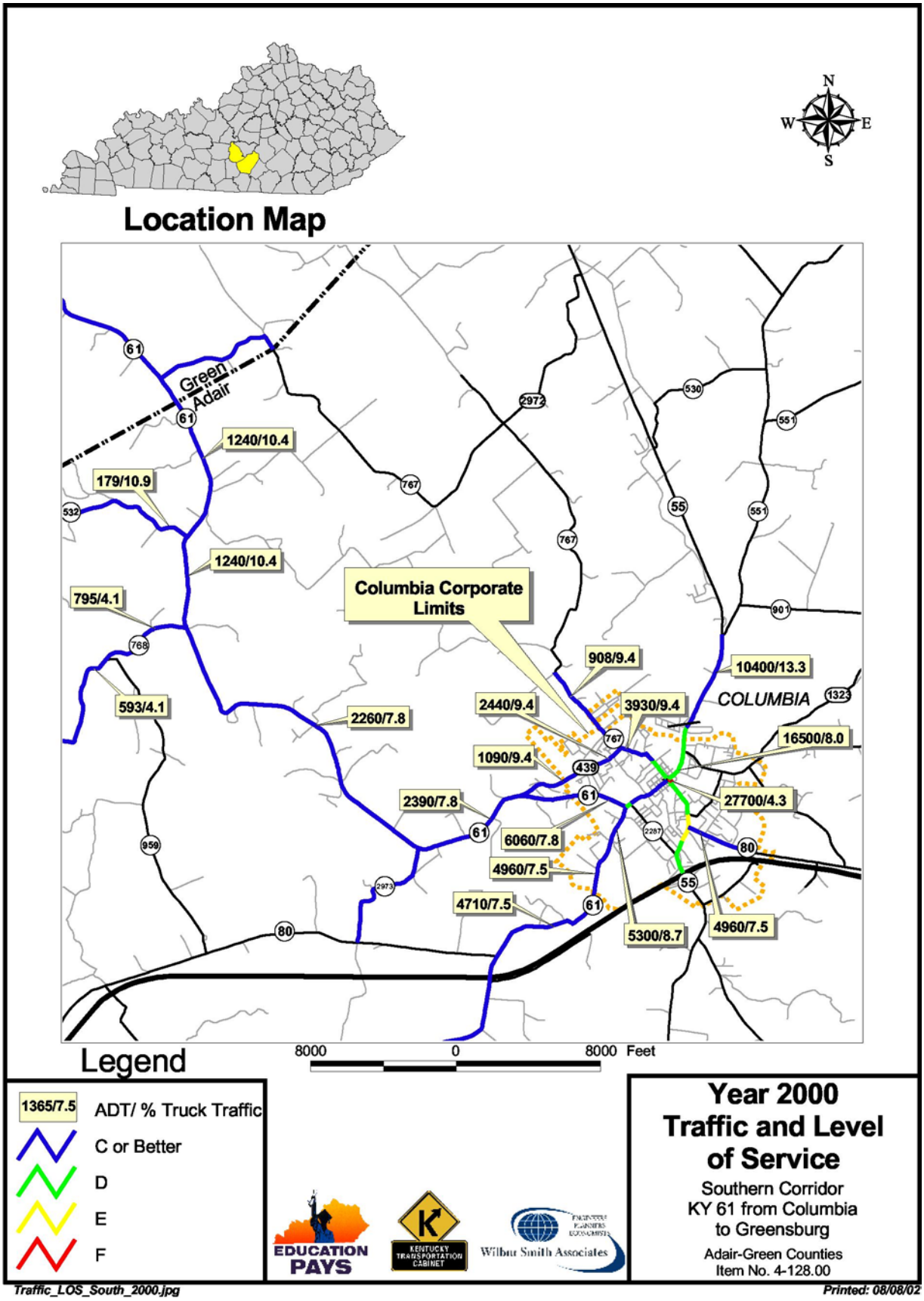


Figure 5. Year 2000 Traffic and Level of Service – Southern Corridor

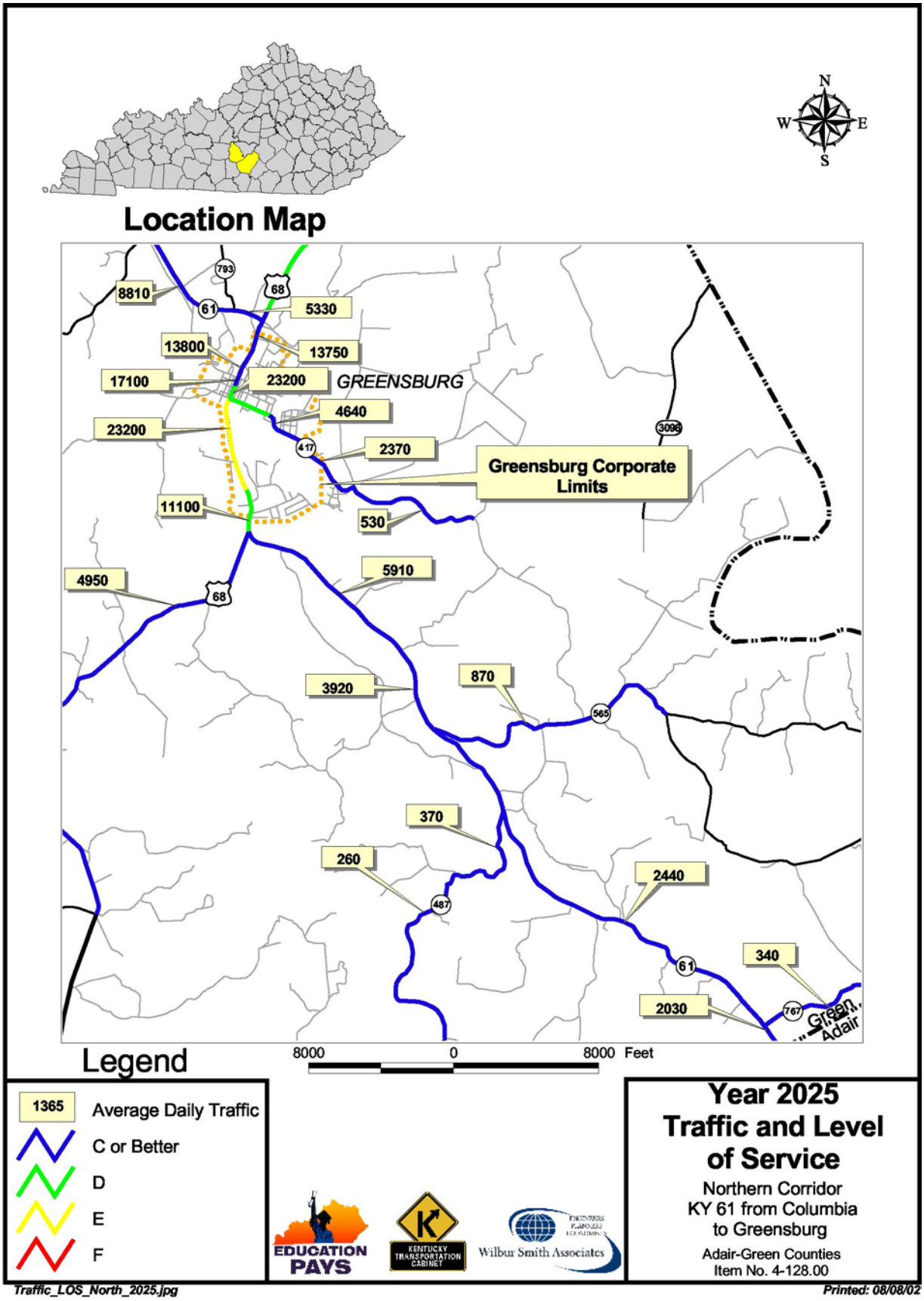


Figure 6. Year 2025 Traffic and Level of Service – Northern Corridor

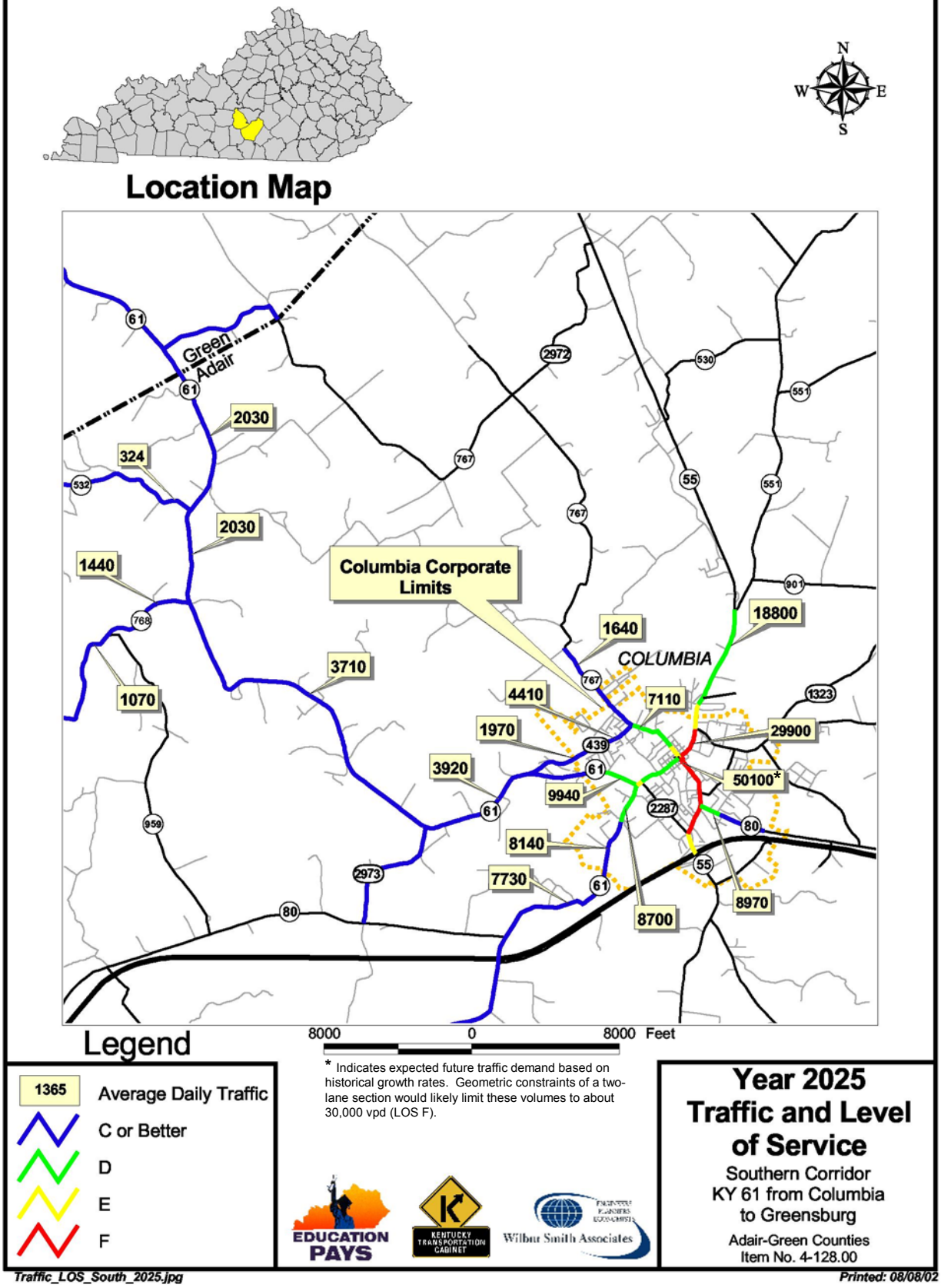


Figure 7. Year 2025 Traffic and Level of Service – Southern Corridor

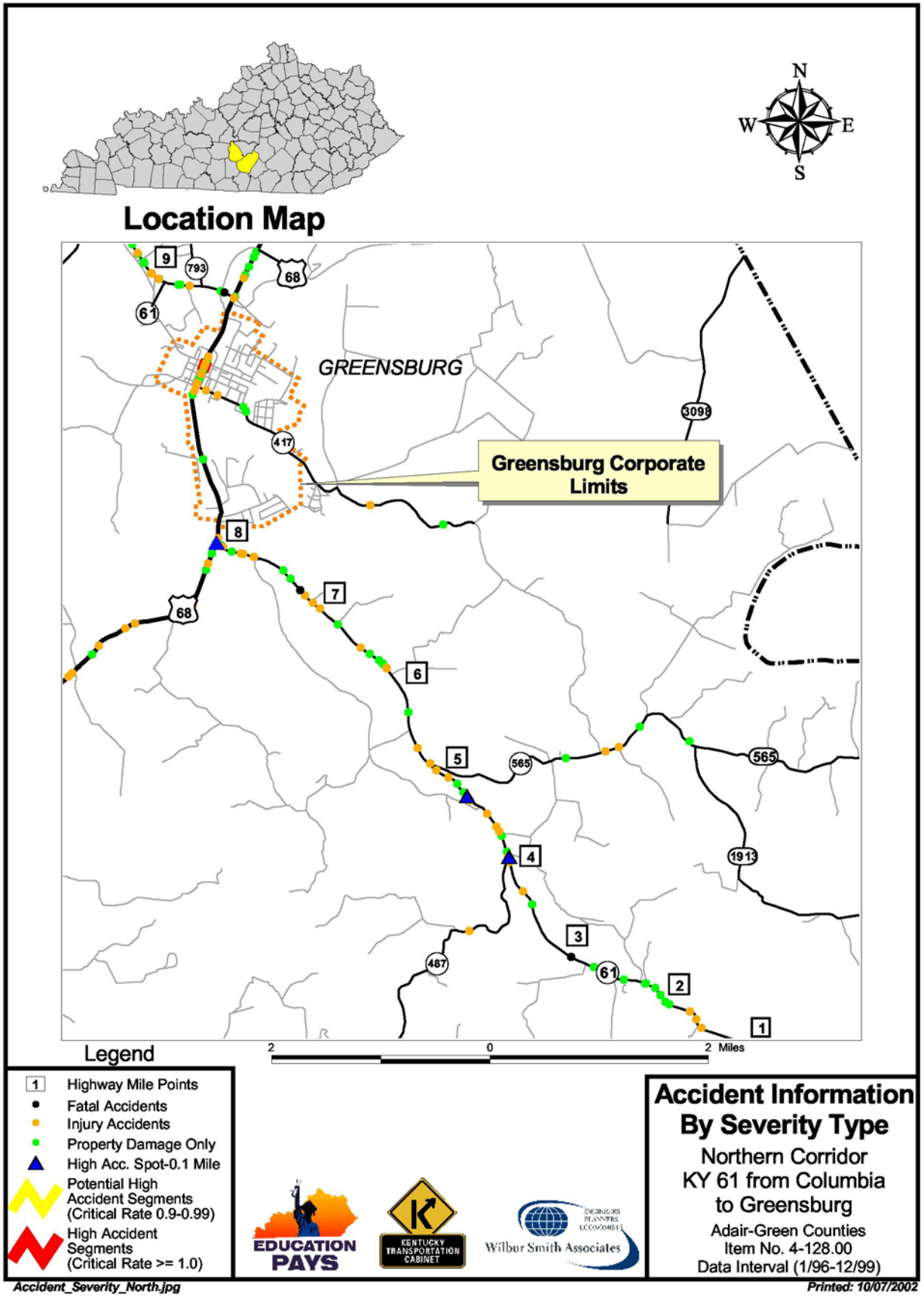


Figure 8. Accident Information by Severity Type - Northern Corridor

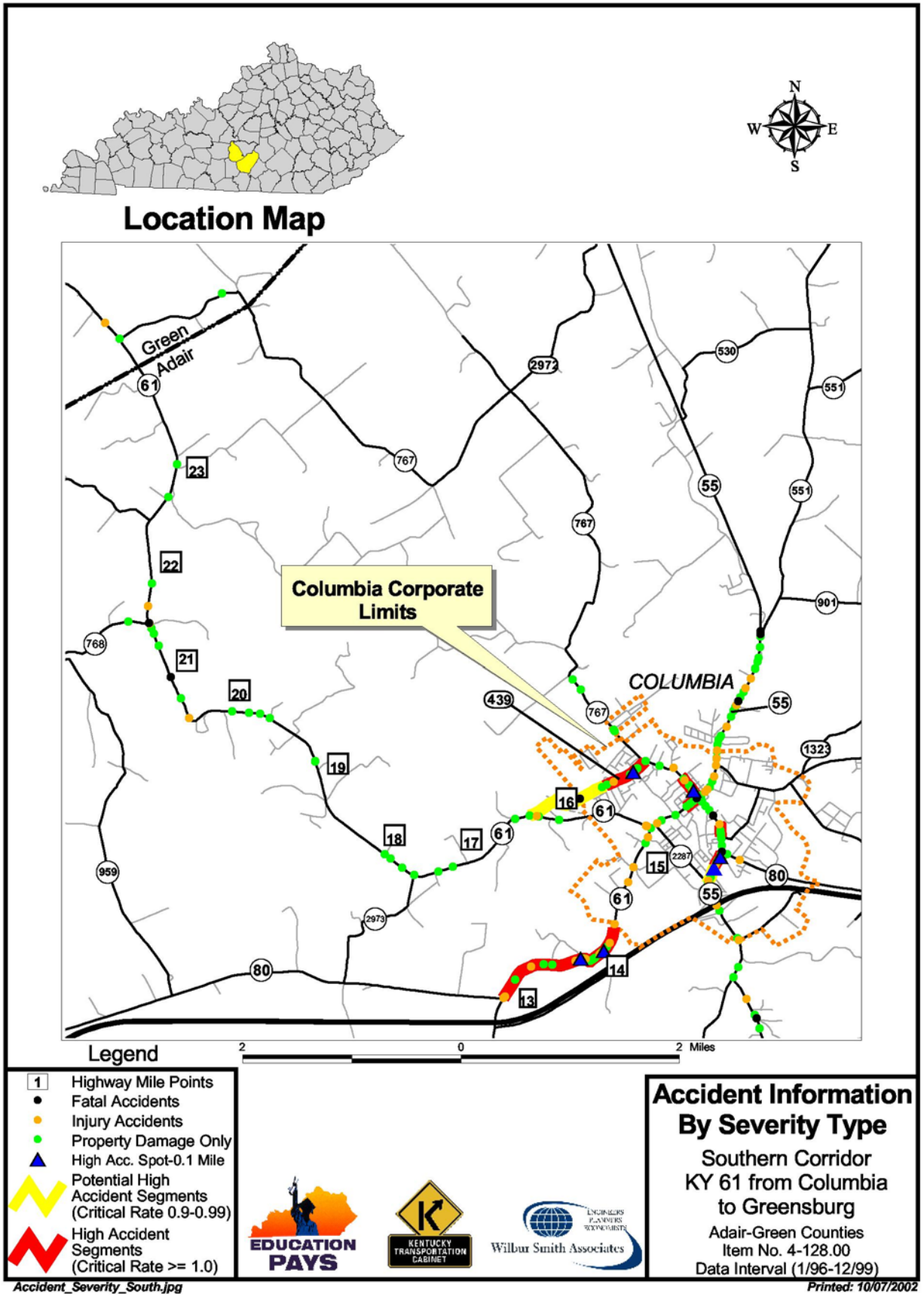


Figure 9. Accident Information by Severity Type - Southern Corridor

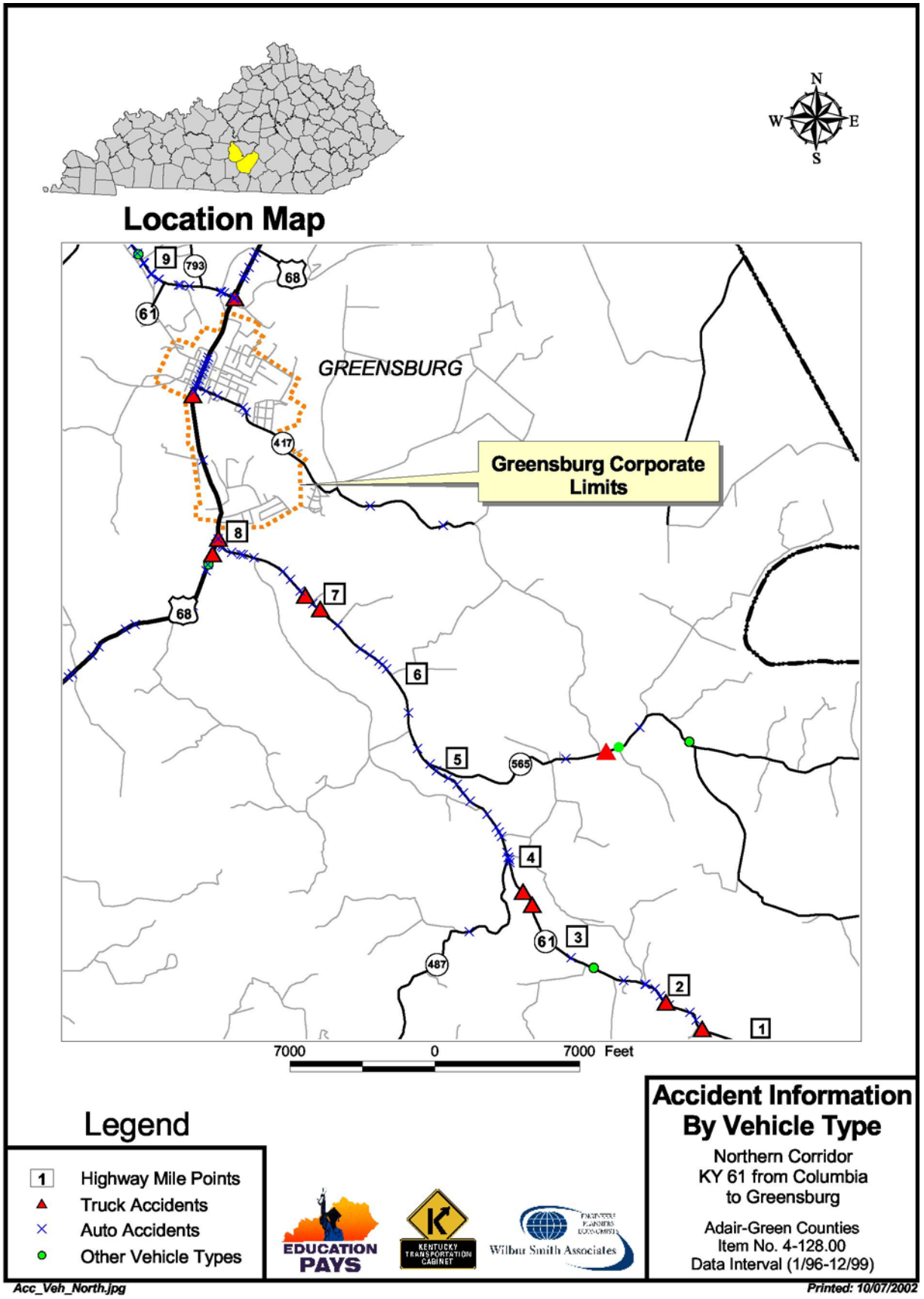


Figure 10. Accident Information by Vehicle Type – Northern Corridor

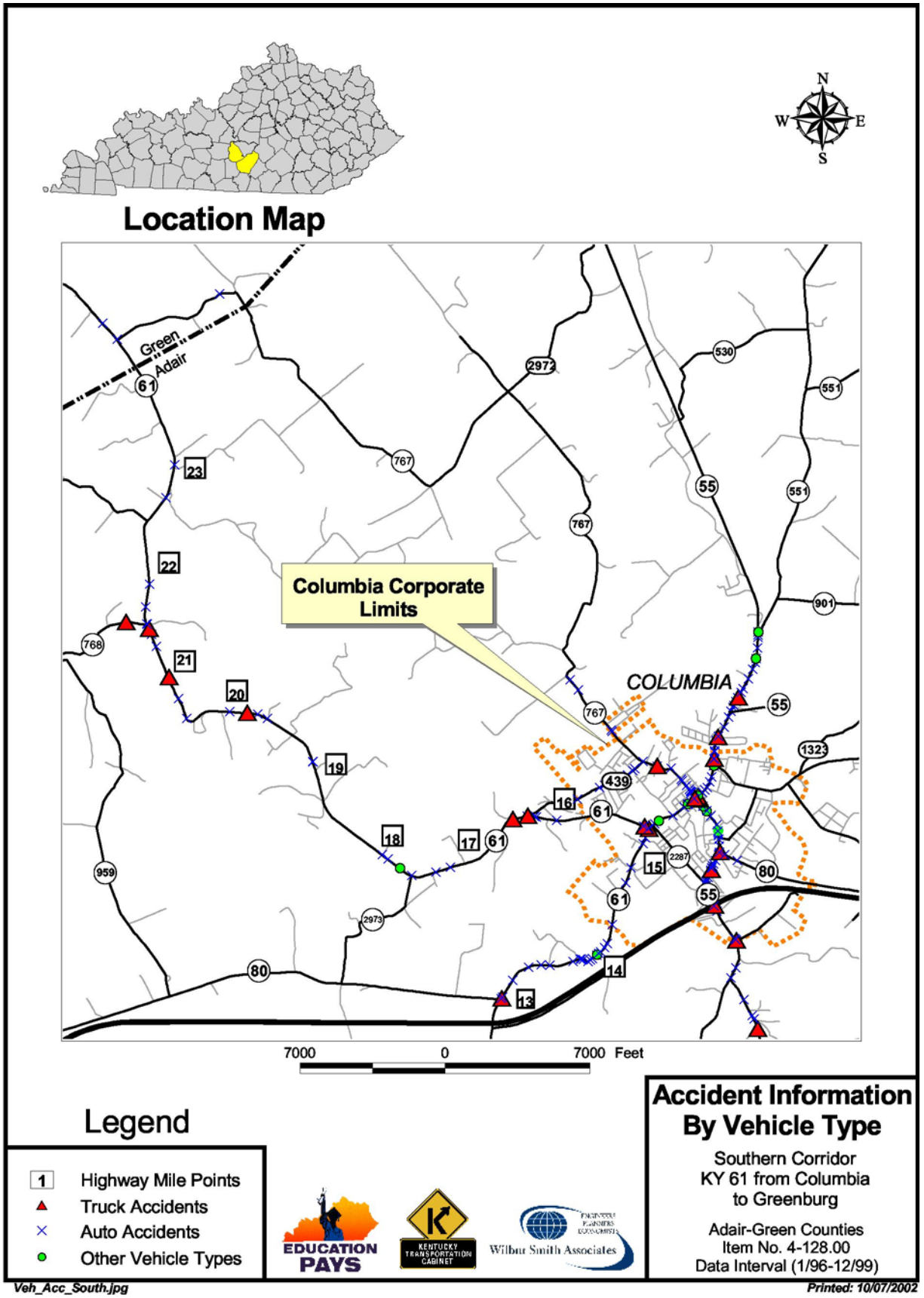


Figure 11. Accident Information by Vehicle Type – Southern Corridor

Figure 12. Environmental Footprint on Topographic Map – Northern Corridor

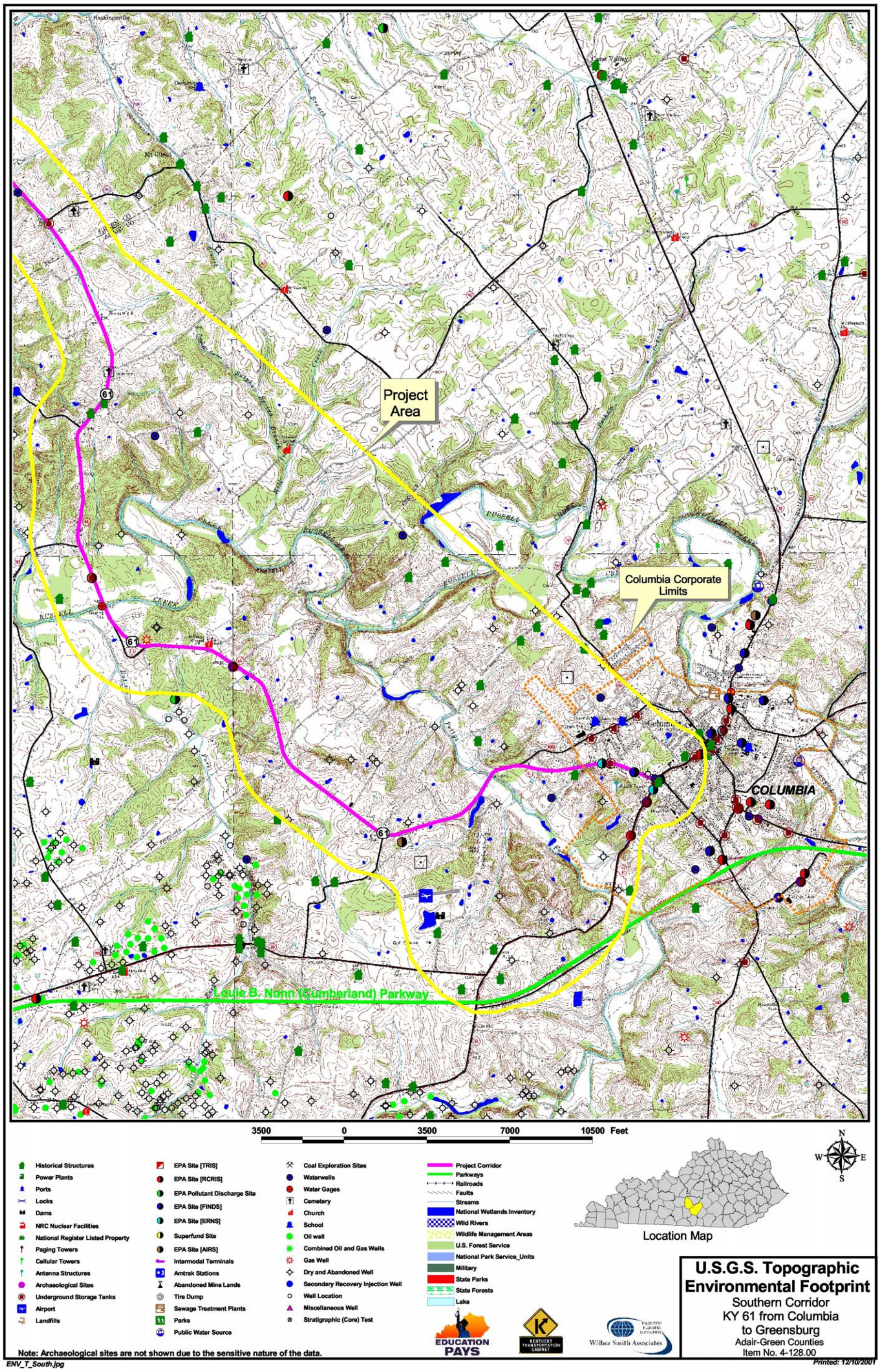


Figure 13. Environmental Footprint on Topographic Map – Southern Corridor

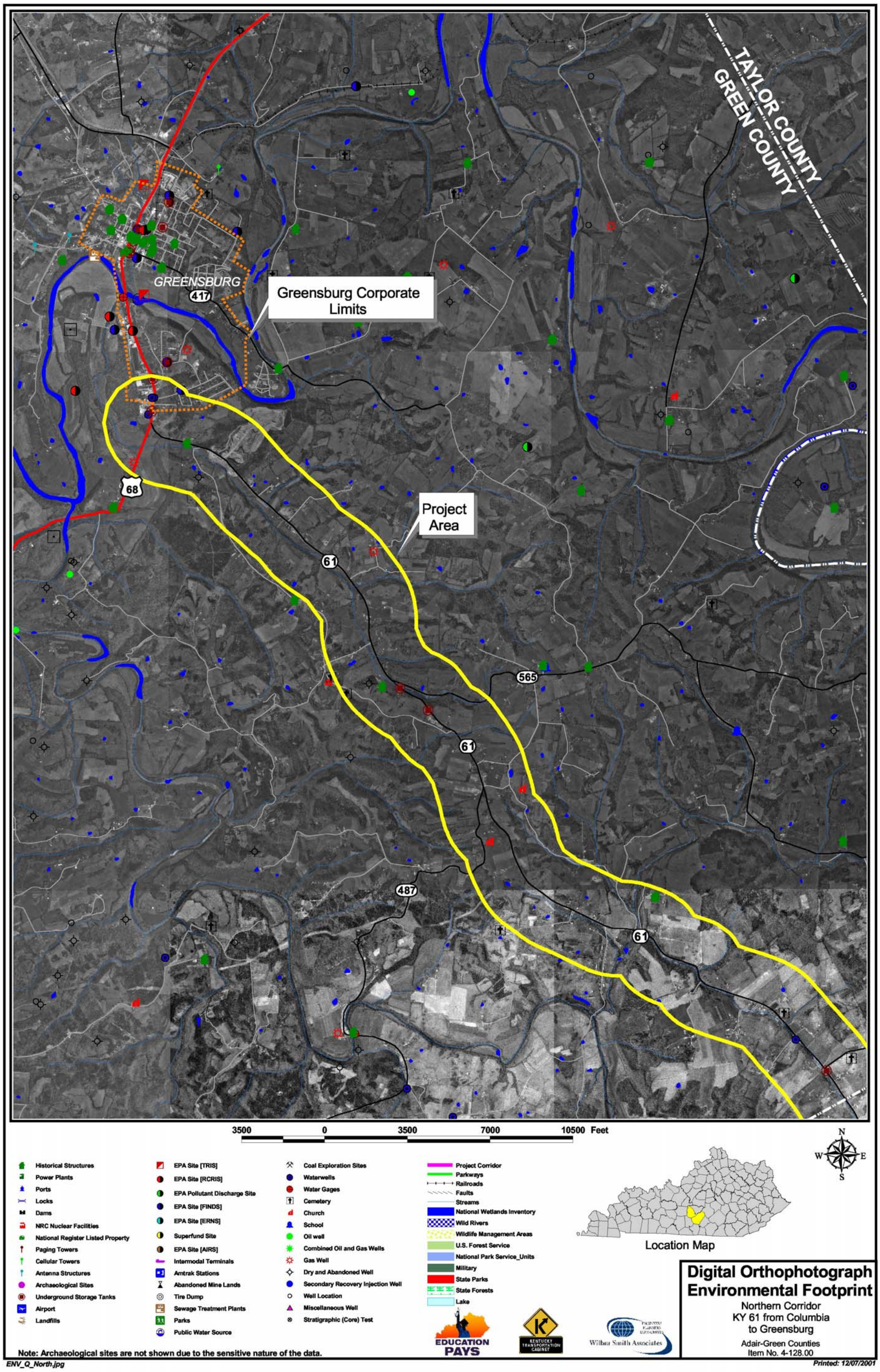


Figure 14. Environmental Footprint on Digital Orthophotograph – Northern Corridor

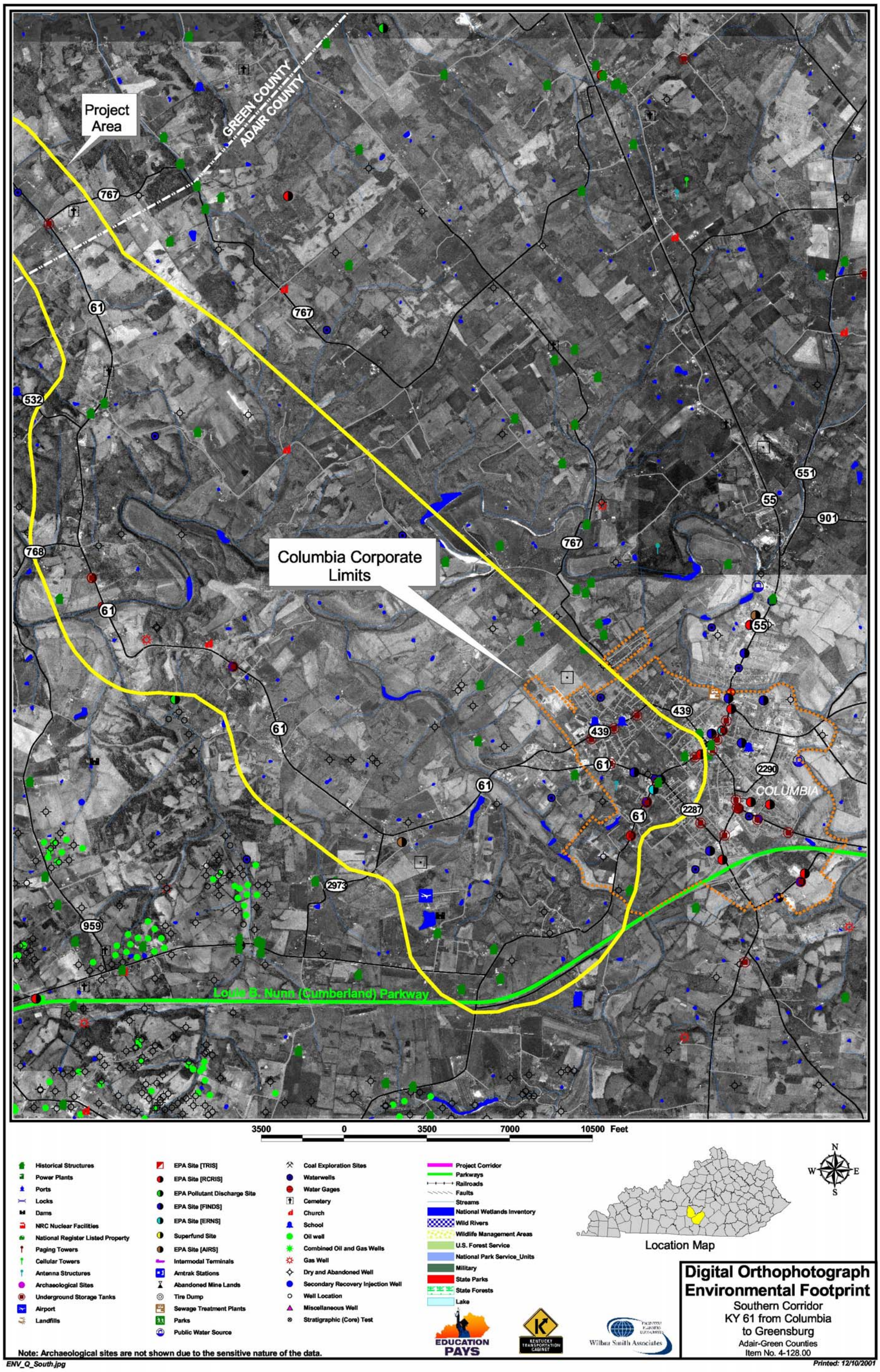
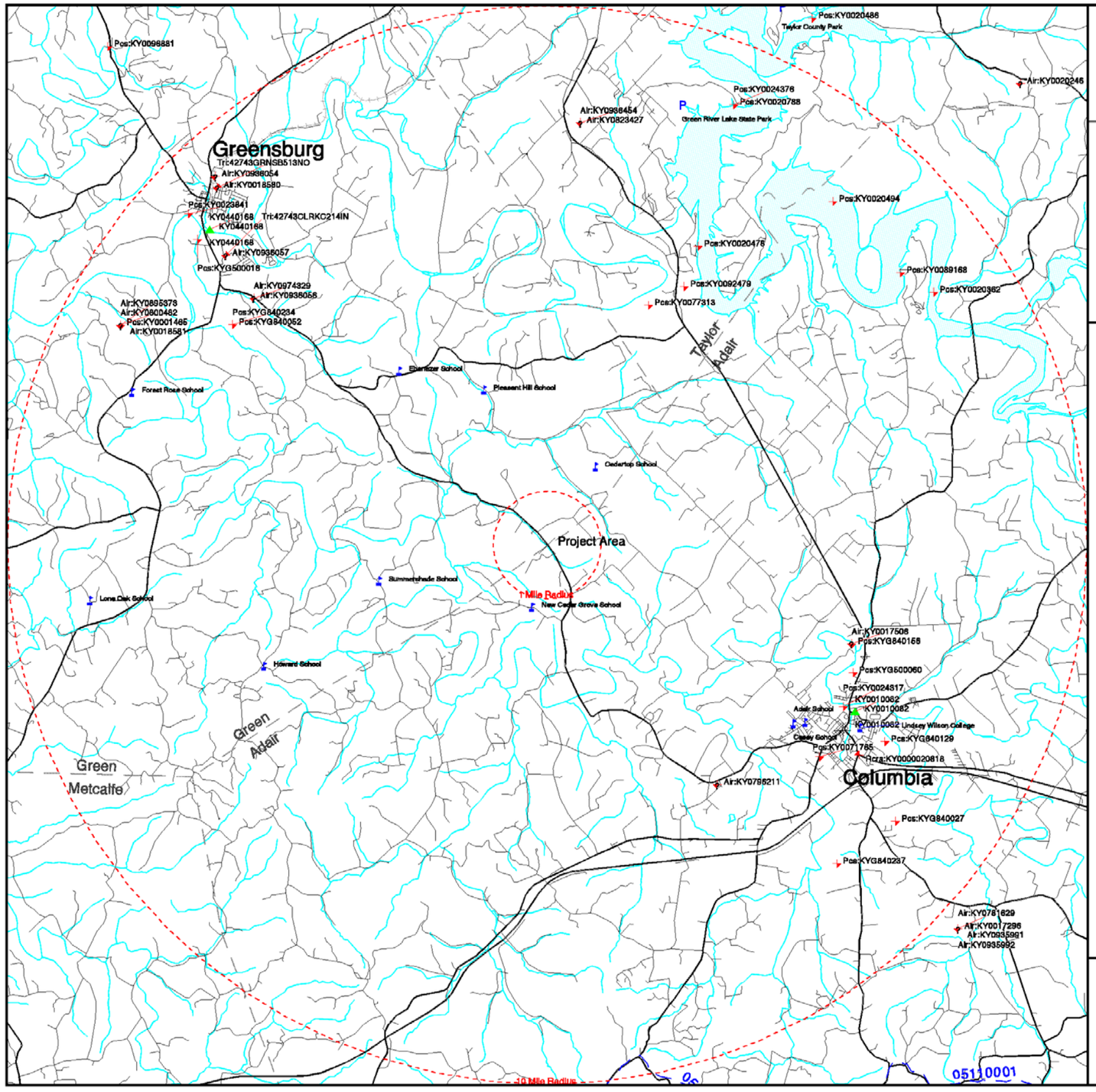


Figure 15. Environmental Footprint on Digital Orthophotograph – Southern Corridor



Environmental Protection Agency (EPA) Monitored Sites

KY 61 from Columbia to Greensburg

Adair-Green Counties, Item No. 4-128.00

This computer representation has been compiled by the U.S. Environmental Protection Agency (EPA) from sources which have supplied data or information that has not been verified by the the EPA. This data is offered here as a general representation only, and is not to be used for commercial purposes without verification by an independant professional qualified to verify such data or information. The EPA does not guarantee the accuracy, completeness, or timeliness of the information shown, and shall not be liable for any loss or injury resulting from reliance upon the information shown.

LEGEND

Note: Facility labeling turned OFF if more than 250 points.
Some facilities without good addresses may plot at zip code centroids.

- CERCLIS NPL Site
- CERCLIS NPL Site (Proposed)
- CERCLIS Deleted From NPL Final Site
- CERCLIS Part of NPL Final Site
- CERCLIS Non-NPL Site Mabe located by zipcode!
- Archived from CERCLIS
- RCRA TSD or LQG Site (Others Excluded)
- EPCRA TRI Site (Toxics Release Inventory)
- PCS Facility Site
- AFS/AIRS Site
- Undefined or Poor Locational Accuracy (More than 500 meters)
- Public Water Supply EPA SDWIS System
- Hospital (From 1995 GNIS names file)
- School (From 1995 GNIS names file)
- Park (From 1995 GNIS names file)
- Basin Boundary USGS Catalog Unit
- County Boundary

Note: The one- and ten-mile radius circles are automatically placed on this map when created by the EPA's SITEPLUS data request system. The radii are based on the defined project's center point.

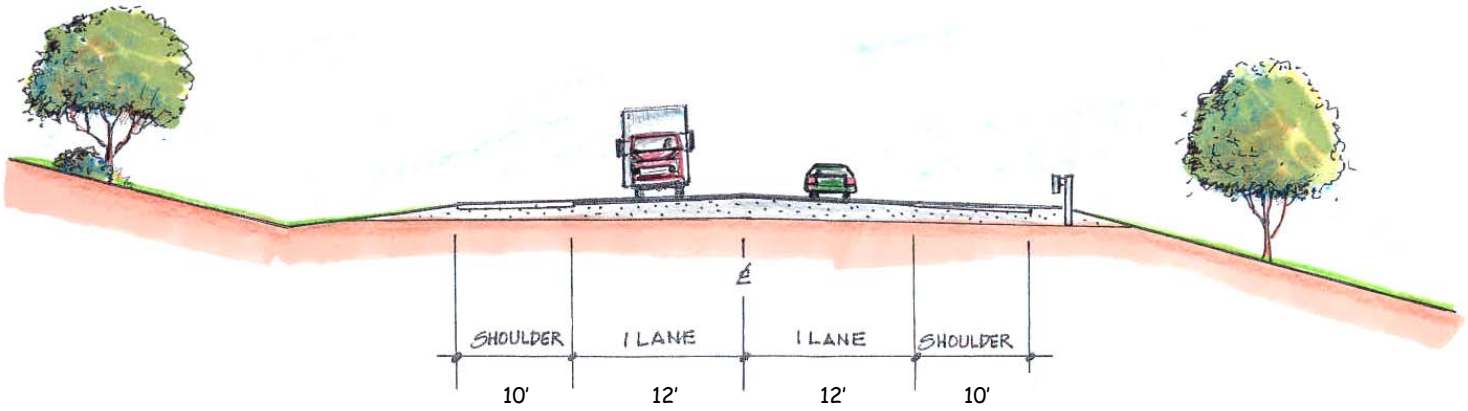
0 1 2 3 4 5 6
Miles
Albers Projection

EPA
U.S. Environmental Protection Agency

Produced 01/30/01
By SITEPLUS (Req s64043)

Figure 16.
Environmental Protection Agency (EPA) Monitored Sites

KY 61
from Columbia to Greensburg
Adair-Green Counties
Item No. 4-128.00



2 Lane Rural Section

Note: The dimensions shown in this diagram provide consistency with the reconstruction of KY 61 south to the Tennessee State Line.

Figure 17. Typical Highway Section

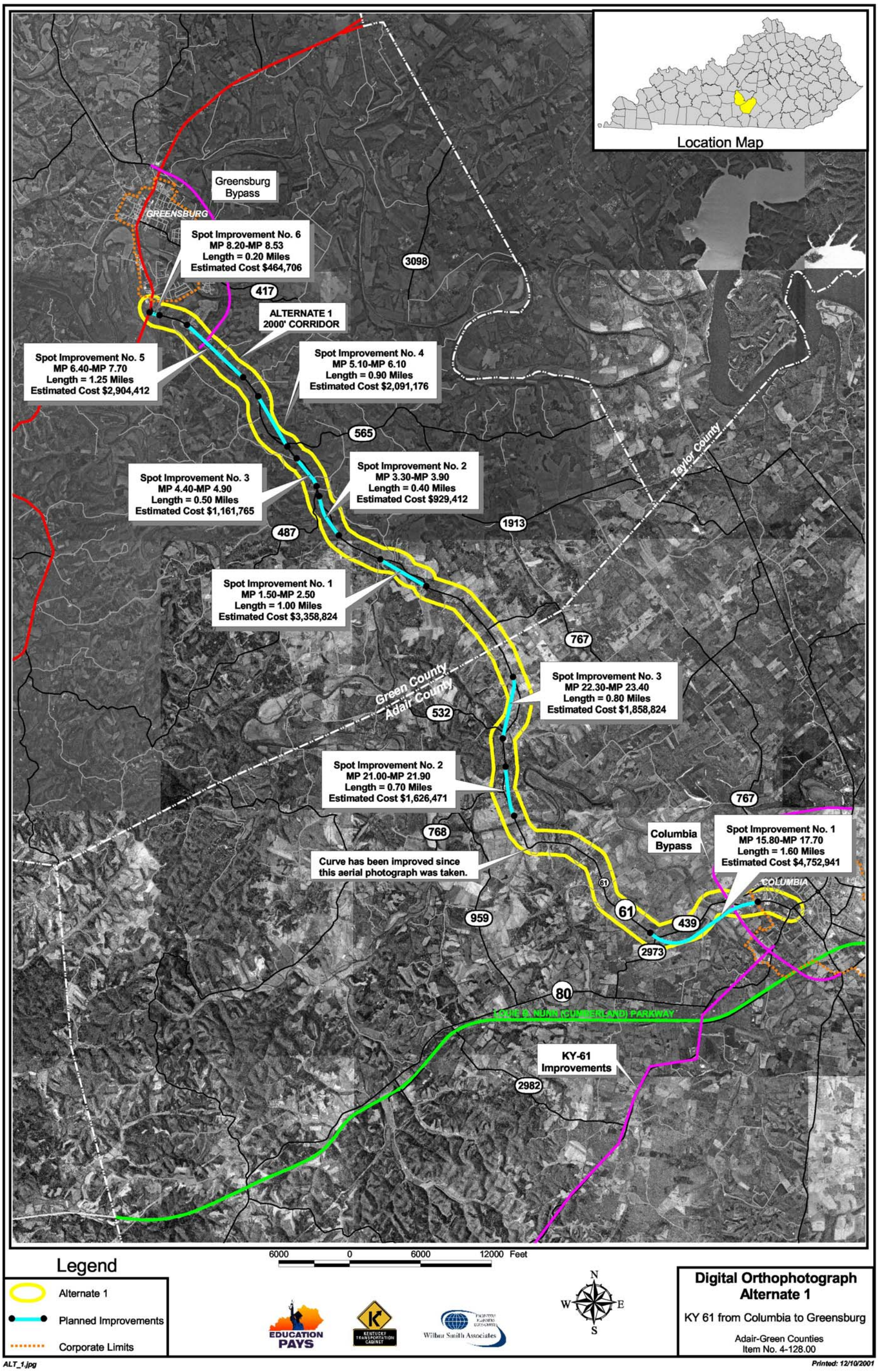


Figure 18. Corridor Alternate 1

Note: Segment lengths shown in the figure above are the reconstructed lengths of the spot improvements.

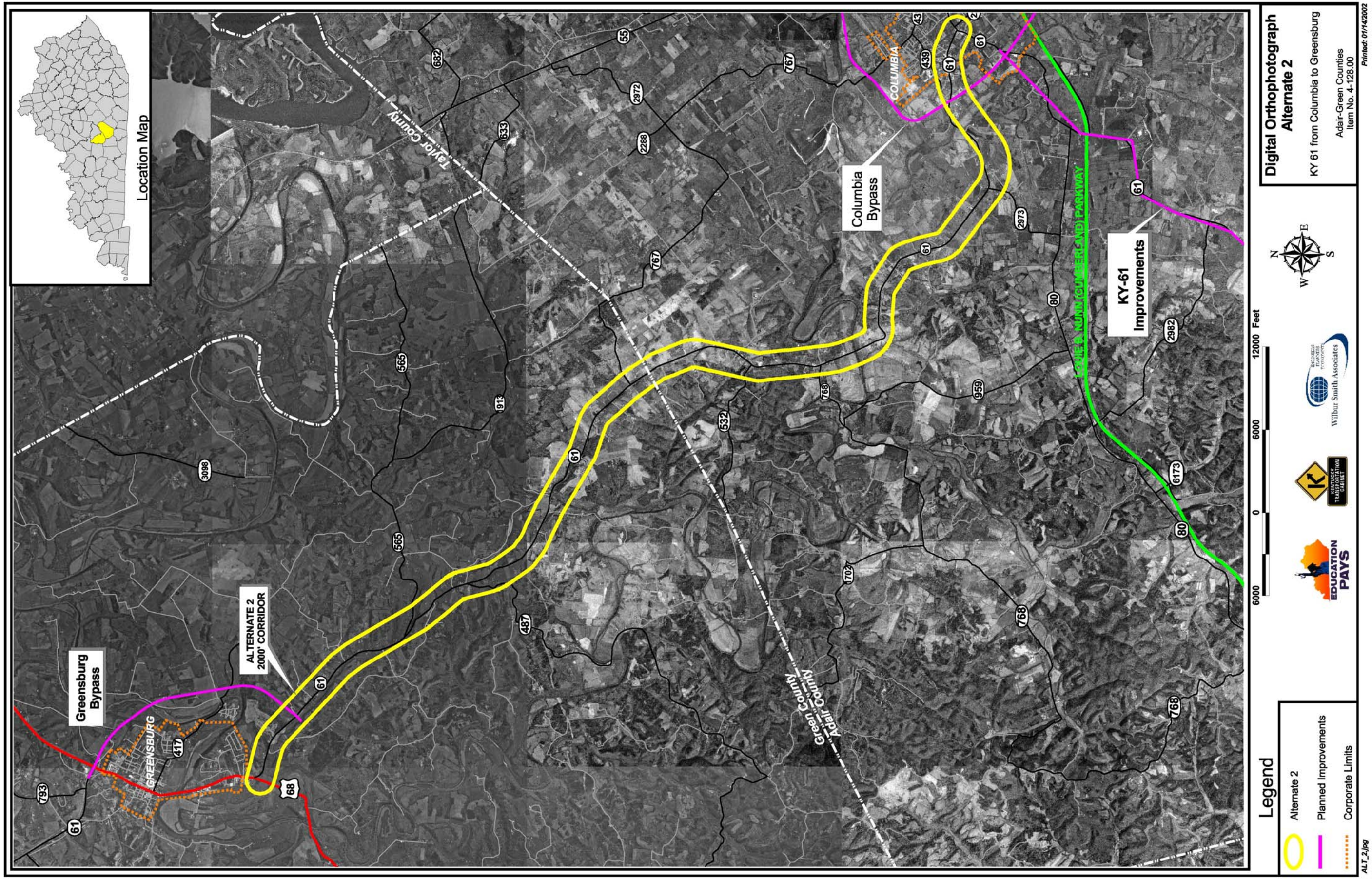


Figure 19.
Corridor Alternate 2

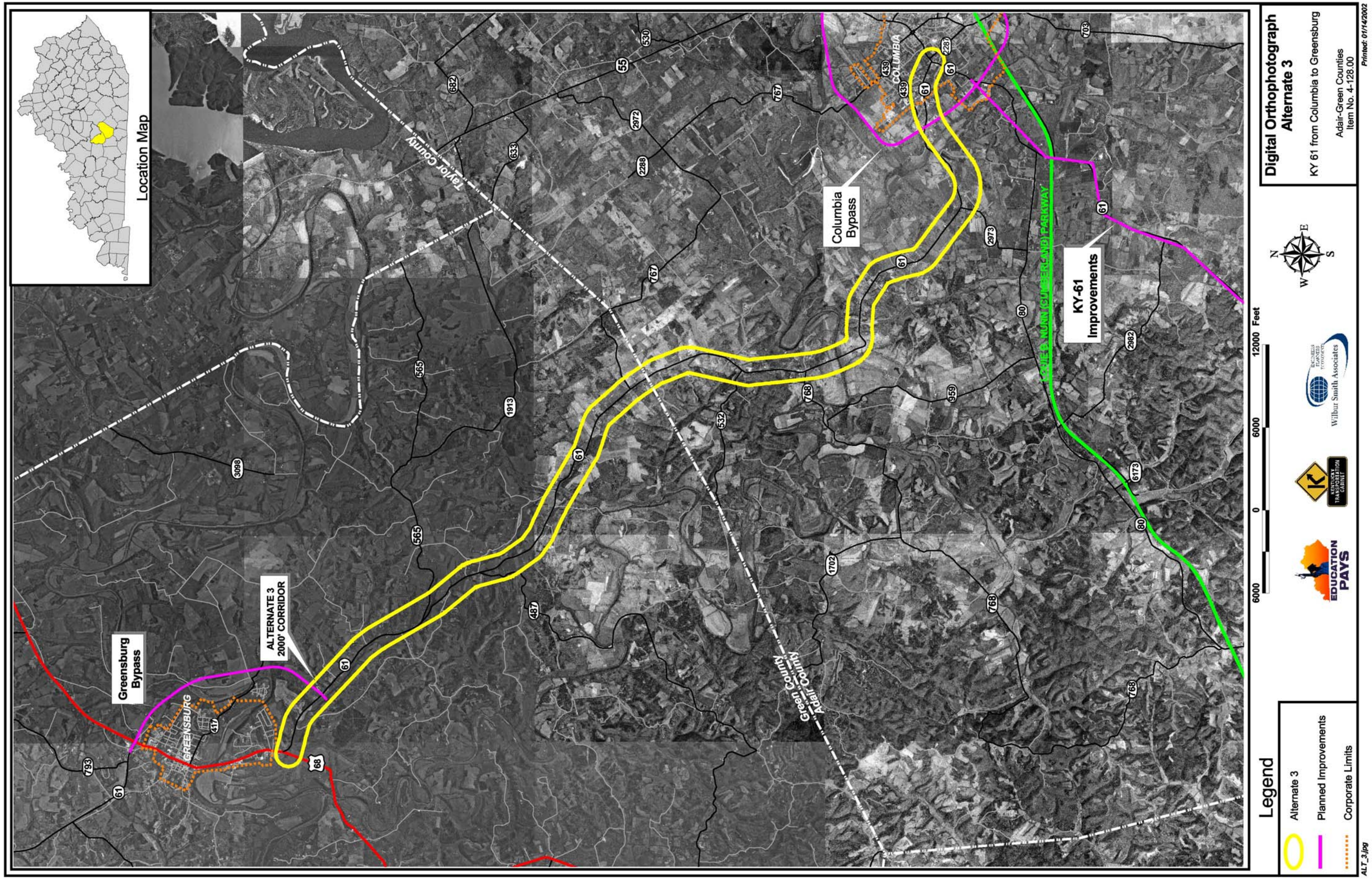


Figure 20.
Corridor Alternate 3

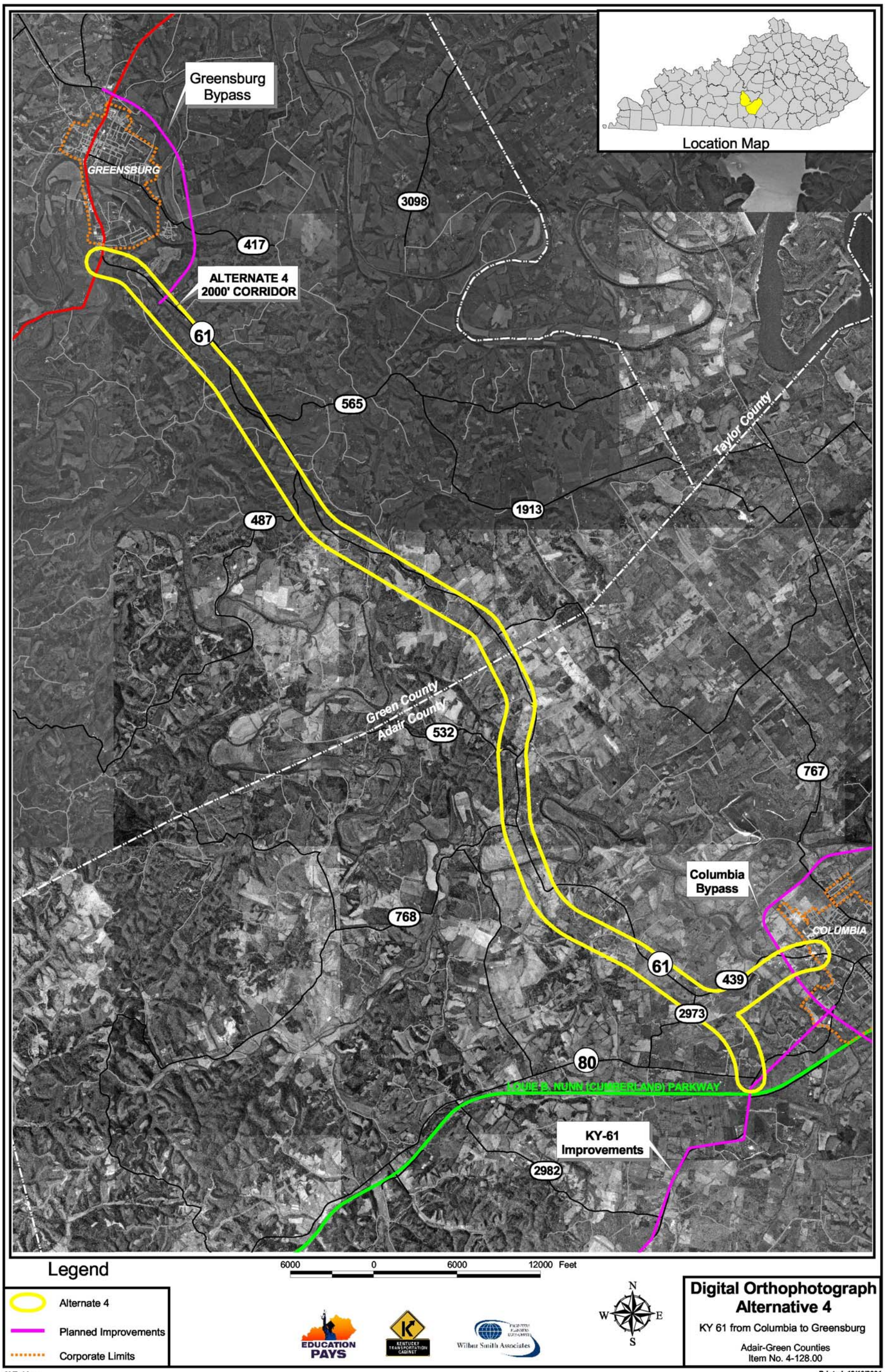


Figure 21. Corridor Alternate 4

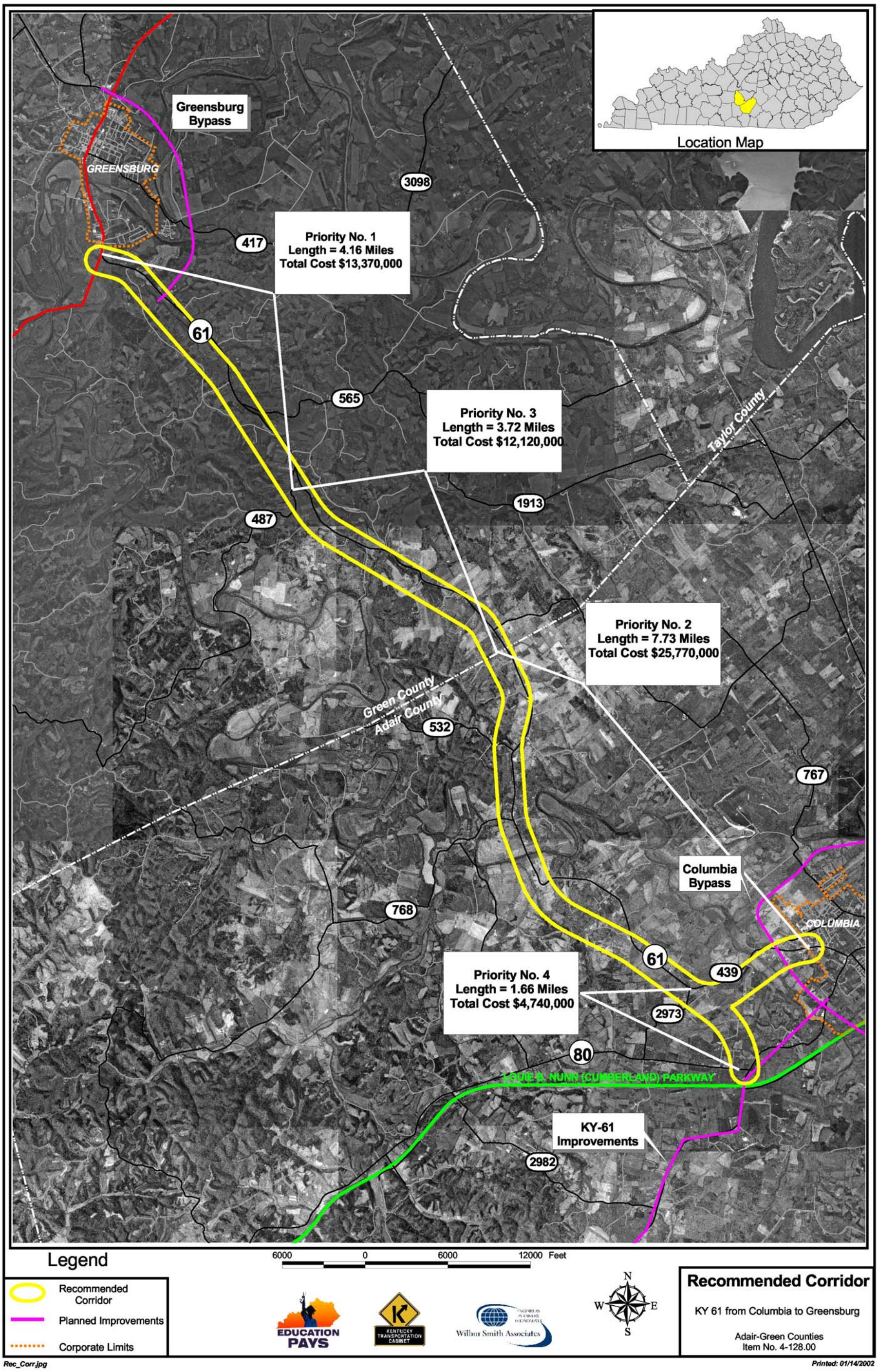


Figure 22. Recommended Corridor

APPENDIX B.
TABLES

LIST OF TABLES

Table 1. Systems, Traffic, and Geometric Data

Adair County

KY 61, M.P. 7.850 (at KY 768 East) to M.P. 23.997 (at the Green County Line)

Adair-Green Counties, Item No. 4-128.00

Reconstruction of KY 61 from Columbia to Greensburg

Functional Classification	
MP 7.85 to MP 15.248	Rural Major Collector
MP 15.248 to MP 23.997	Rural Minor Arterial
State System	State Primary (Other)
Defense Highway System	MP 15.250 - MP 23.997
NHS	No
National Truck Network	No
Truck Weight Class	
MP 12.879 to MP 12.897	AAA
MP 12.897 to MP 23.997	AA

Type Road	Undivided
Type of Terrain	Rolling
# of Bridges	6
Pavement Type	
MP 12.879 to MP 12.897	Mixed Bituminous
MP 12.897 to MP 20.997	High Flexible
MP 20.997 to MP 21.262	Mixed Bituminous
MP 21.262 to MP 23.997	High Flexible
Bike Route	MP 0.000-MP 14.516
Scenic Byway	MP 11.033-MP 13.402

Begin MP	End MP	Length (Miles)	2000 ADT	Annual Growth Rate	2025 ADT	% Trucks	Number of Lanes	Lane Width (Feet)	Shoulder Width (Feet)	% Passing Sight Distance	Speed Limit (MPH)	2000 LOS	2025 LOS
7.850	12.879	5.029	2,260	2.0%	3,710	7.5	2	9	4	15	55	B	B
12.879	14.252	1.373	4,710	2.0%	7,730	7.5	2	9	4	15	55	C	C
14.252	14.680	0.428	4,960	2.0%	8,140	7.5	2	9	4	15	55	C	C
14.680	14.830	0.150	4,960	2.0%	8,140	7.5	2	9	4	15	45	C	C
14.830	15.050	0.220	5,300	2.0%	8,700	7.8	2	9	4	15	35	C	D
15.050	15.248	0.198	5,300	2.0%	8,700	7.8	2	9	4	15	45	C	D
15.248	15.670	0.422	6,060	2.0%	9,940	7.8	2	10	4	0	45	C	D
15.670	15.850	0.180	2,510	2.0%	4,120	8.7**	2	10	4	0	45	B	C
15.850	16.362	0.512	2,510	2.0%	4,120	8.7**	2	10	4	0	55	B	B
16.362	16.367	0.005	2,390	2.0%	3,920	8.7**	2	10	4	0	55	B	B
16.367	17.161	0.794	2,390	2.0%	3,920	8.7**	2	9	4	0	55	B	B
17.161	17.265	0.104	2,390	2.0%	3,920	8.7**	2	10	4	50	55	A	B
17.265	17.660	0.395	2,390	2.0%	3,920	8.7**	2	9	4	37	55	A	B
17.660	20.997	3.337	2,260	2.0%	3,710	8.7**	2	9	4	37	55	A	A
20.997	21.262	0.265	2,260	2.0%	3,710	8.7**	2	10	4	60	55	A	A
21.262	21.445	0.183	2,260	2.0%	3,710	8.7**	2	9	4	50	55	A	A
21.445	23.997	2.552	1,240	2.0%	2,030	10.4**	2	9	4	50	55	A	A

**Indicates value was obtained from HIS data files

Table 1. Systems, Traffic, and Geometric Data (continued)

Adair County

KY 55, M.P. 10.059 (at Louie B Nunn Parkway) to M.P. 12.849 (at KY 551)

Adair-Green Counties, Item No. 4-128.00
Reconstruction of KY 61 from Columbia to Greensburg

Functional Classification	Rural Principal Arterial
State System	State Primary (Other)
Defense Highway System	Yes
NHS	No
National Truck Network	MP 10.059 - MP 19.006
Truck Weight Class	
MP 10.059 to MP 10.614	AA
MP 10.614 to MP 12.849	AAA
Type of Terrain	Rolling

Type Road	
MP 10.059 to MP 10.159	Divided (raised non-mountable)
MP 10.159 to MP 11.170	Undivided
MP 11.170 to MP 11.310	Couplet
MP 11.310 to MP 12.849	Undivided
# of Bridges	2
Pavement Type	High Flexible
Scenic Byway	MP 10.164 - MP 19.006

Begin MP	End MP	Length (Miles)	2000 ADT	Annual Growth Rate	2025 ADT	% Trucks	Number of Lanes	Lane Width (Feet)	Shoulder Width (Feet)	% Passing Sight Distance	Speed Limit (MPH)	2000 LOS	2025 LOS
10.059	10.159	0.100	13,500	2.4%	24,400	7.0**	2	14	6	N / A	35	D	E
10.159	10.316	0.157	13,500	2.4%	24,400	7.0**	2	14	2	N / A	35	D	E
10.316	10.470	0.154	17,800	2.4%	32,200^	7.0**	2	14	2	N / A	35	D	F
10.470	10.614	0.144	21,000	2.4%	38,000^	7.0**	2	14	2	N / A	35	E	F
10.614	10.720	0.106	25,400	2.4%	46,000^	4.3	2	12	3	N / A	35	E	F
10.720	10.840	0.120	14,200	2.4%	25,700	7*	2	12	3	N / A	35	D	F
10.840	11.142	0.302	15,000	2.4%	27,100	7*	2	12	3	N / A	35	D	F
11.142	11.170	0.028	15,000	2.4%	27,100	7*	2	12	2	N / A	35	D	F
11.170	11.190	0.020	27,700	2.4%	50,100^	4.3**	2	12	2	N / A	25	F	F
11.190	11.200	0.010	13,600	2.4%	24,600	10*	2	12	2	N / A	25	D	E
11.200	11.285	0.085	16,500	2.4%	29,900	8*	2	12	2	N / A	25	D	F
11.285	11.519	0.234	16,500	2.4%	29,900	8*	2	12	2	N / A	35	D	F
11.519	11.655	0.136	12,600	2.4%	22,800	10.8*	2	12	2	N / A	35	D	E
11.655	11.700	0.045	12,600	2.4%	22,800	10.8*	2	12	2	N / A	45	D	E
11.700	11.769	0.069	12,600	2.4%	22,800	10.8*	2	12	10	N / A	45	D	E
11.769	11.780	0.011	12,600	2.4%	22,800	10.8**	2	12	10	45	45	D	E
11.780	12.010	0.230	10,400	2.4%	18,800	13.3	2	12	10	45	45	C	D
12.010	12.849	0.839	10,400	2.4%	18,800	13.3	2	12	10	45	55	C	D

* Indicates an adjustment has been made.

** Indicates value was obtained from HIS data files.

^ Indicates expected future traffic demand based on historical growth rates. Geometric constraints of a two-lane section would likely limit these volumes to a maximum of about 30,000 vpd (LOS F).

Table 1. Systems, Traffic, and Geometric Data (continued)

Adair County
KY 80, MP 11.775 (at KY 61) to MP 12.980 (at Columbia Corporate Limits)

Adair-Green Counties, Item No. 4-128.00
Reconstruction of KY 61 from Columbia to Greensburg

Functional Classification	
MP 11.775 to MP 12.282	Rural Minor Arterial
MP 12.282 to MP 12.980	Rural Major Collector
State System	
MP 11.775 to MP 12.282	State Primary (Other)
MP 12.282 to MP 12.980	State Secondary
Defense Highway System	MP 11.780 - MP 12.280

NHS	No
National Truck Network	No
Truck Weight Class	AAA
Type Road	Undivided
Type of Terrain	Rolling
# of Bridges	None
Pavement Type	High Flexible
Scenic Byway	MP 0.000 - MP 22.058

Begin MP	End MP	Length (Miles)	2000 ADT	Annual Growth Rate	2025 ADT	% Trucks	Number of Lanes	Lane Width (Feet)	Shoulder Width (Feet)	% Passing Sight Distance	Speed Limit (MPH)	2000 LOS	2025 LOS
11.775	11.820	0.045	12,900	2.4%	23,300	7.8	2	10	4	N / A	35	D	E
11.820	11.900	0.080	8,420	2.4%	15,200	7.8	2	10	4	N / A	35	C	D
11.900	12.000	0.100	8,420	2.4%	15,200	7.8	2	10	2	N / A	35	C	D
12.000	12.100	0.100	8,420	2.4%	15,200	7.8	2	10	3	N / A	35	C	D
12.100	12.140	0.040	8,420	2.4%	15,200	7.8	2	10	0	N / A	35	C	D
12.140	12.200	0.060	9,670	2.4%	17,500	7.8	2	10	0	N / A	35	C	D
12.200	12.282	0.082	9,670	2.4%	17,500	7.8	2	10	0	N / A	25	C	D
12.282	12.309	0.027	7,320	2.4%	13,200	7.5	2	10	4	N / A	35	C	D
12.309	12.400	0.091	7,320	2.4%	13,200	7.5	2	10	4	12	35	C	D
12.400	12.500	0.100	4,960	2.4%	8,970	7.5	2	10	4	12	35	B	D
12.500	12.780	0.280	4,960	2.4%	8,970	7.5	2	10	4	12	45	B	C
12.780	12.889	0.109	4,960	2.4%	8,970	7.5	2	10	4	12	55	B	C
12.889	12.980	0.091	4,960	2.4%	8,970	7.5	2	10	4	12	55	B	C

Table 1. Systems, Traffic, and Geometric Data (continued)

Adair County
KY 439, M.P. 0.000 to M.P. 1.787 (at KY 55)

Adair-Green Counties, Item No. 4-128.00
Reconstruction of KY 61 from Columbia to Greensburg

Functional Classification	Rural Minor Collector
State System	Rural Secondary
Defense Highway System	No
NHS	No
National Truck Network	No
Truck Weight Class	A
Type Road	Undivided
Type of Terrain	Rolling
# of Bridges	None
Pavement Type	Mixed Bituminous
Bike Route	MP 0.000 - MP 1.186

Begin MP	End MP	Length (Miles)	2000 ADT	Annual Growth Rate	2025 ADT	% Trucks	Number of Lanes	Lane Width (Feet)	Shoulder Width (Feet)	% Passing Sight Distance	Speed Limit (MPH)	2000 LOS	2025 LOS
0.000	0.410	0.410	1,090	2.4%	1,970	9.4	2	10	4	N / A	55	B	B
0.410	0.760	0.350	1,090	2.4%	1,970	9.4	2	10	4	N / A	35	B	B
0.760	1.186	0.426	2,440	2.4%	4,410	9.4	2	10	4	N / A	35	B	C
1.186	1.560	0.374	3,930	2.4%	7,110	9.4	2	10	4	N / A	35	C	D
1.560	1.670	0.110	5,900	2.4%	10,700	9.4	2	10	4	N / A	35	D	D
1.670	1.687	0.017	7,420	2.4%	13,400	9.4	2	10	4	N / A	35	D	E
1.687	1.710	0.023	7,420	2.4%	13,400	9.4	2	10	Curbed	N / A	35	D	E
1.710	1.787	0.077	7,420	2.4%	13,400	9.4	2	10	Curbed	N / A	25	D	E

Table 1. Systems, Traffic, and Geometric Data (continued)

Adair County
KY 532, M.P. 0.000 to M.P. 2.302 (at KY 61)

Adair-Green Counties, Item No. 4-128.00
Reconstruction of KY 61 from Columbia to Greensburg

Functional Classification	Rural Local
State System	Supplemental Road
Defense Highway System	No
NHS	No
National Truck Network	No
Truck Weight Class	A
Type Road	Undivided
Type of Terrain	Rolling
# of Bridges	None
Pavement Type	Mixed Bituminous

Begin MP	End MP	Length (Miles)	2000 ADT	Annual Growth Rate	2025 ADT	% Trucks	Number of Lanes	Lane Width (Feet)	Shoulder Width (Feet)	% Passing Sight Distance	Speed Limit (MPH)	2000 LOS	2025 LOS
0.000	1.415	1.415	30	2.4%	54	10.9	2	9	3	N / A	55	A	A
1.415	2.302	0.887	179	2.4%	324	10.9	2	9	3	N / A	55	A	A

Table 1. Systems, Traffic, and Geometric Data (continued)

Adair County
KY 767, MP 0.000 to MP 1.068 (at Rocky Hill School)

Adair-Green Counties, Item No. 4-128.00
Reconstruction of KY 61 from Columbia to Greensburg

Functional Classification	Rural Minor Collector
State System	Rural Secondary
Defense Highway System	No
NHS	No
National Truck Network	No
Truck Weight Class	A
Type Road	Undivided
Type of Terrain	Rolling
# of Bridges	None
Pavement Type	Mixed Bituminous
Bike Route	MP 0.0 - MP 7.898

Begin MP	End MP	Length (Miles)	2000 ADT	Annual Growth Rate	2025 ADT	% Trucks	Number of Lanes	Lane Width (Feet)	Shoulder Width (Feet)	% Passing Sight Distance	Speed Limit (MPH)	2000 LOS	2025 LOS
0.000	0.220	0.220	1,760	2.4%	3,180	9.4	2	9	2	N / A	35	B	C
0.220	0.330	0.110	908	2.4%	1,640	9.4	2	9	2	N / A	35	A	B
0.330	0.550	0.220	908	2.4%	1,640	9.4	2	9	2	N / A	45	A	B
0.550	1.068	0.518	908	2.4%	1,640	9.4	2	9	2	N / A	55	A	B

Table 1. Systems, Traffic, and Geometric Data (continued)

Adair County
KY 768, M.P. 0.000 to M.P. 3.477 (at KY 1702)

Adair-Green Counties, Item No. 4-128.00
Reconstruction of KY 61 from Columbia to Greensburg

Functional Classification	Rural Minor Collector
State System	Rural Secondary
Defense Highway System	No
NHS	No
National Truck Network	No
Truck Weight Class	A
Type Road	Undivided
Type of Terrain	Rolling
# of Bridges	2
Pavement Type	Mixed Bituminous

Begin MP	End MP	Length (Miles)	2000 ADT	Annual Growth Rate	2025 ADT	% Trucks	Number of Lanes	Lane Width (Feet)	Shoulder Width (Feet)	% Passing Sight Distance	Speed Limit (MPH)	2000 LOS	2025 LOS
0.000	0.966	0.966	795	2.4%	1,440	4.1	2	9	4	N / A	55	A	B
0.966	3.477	2.511	593	2.4%	1,070	4.1	2	9	4	N / A	55	A	B

Table 1. Systems, Traffic, and Geometric Data (continued)

Adair County
KY 2973, MP 0.000 (at KY 80) to MP 1.385 (at KY 61)

Adair-Green Counties, Item No. 4-128.00
Reconstruction of KY 61 from Columbia to Greensburg

Functional Classification	Rural Local
State System	Rural Secondary
Defense Highway System	No
NHS	No
National Truck Network	No
Truck Weight Class	A
Type Road	Undivided
Type of Terrain	Rolling
# of Bridges	None
Pavement Type	Mixed Bituminous

Begin MP	End MP	Length (Miles)	2000 ADT	Annual Growth Rate	2025 ADT	% Trucks	Number of Lanes	Lane Width (Feet)	Shoulder Width (Feet)	% Passing Sight Distance	Speed Limit (MPH)	2000 LOS	2025 LOS
0.000	1.385	1.385	492	2.4%	900	10.5	2	8	3	N/A	55	A	A

Table 1. Systems, Traffic, and Geometric Data

Green County
KY 61, M.P. 0.000 (at the Adair County Line) to M.P. 9.796 (at KY 88)

Adair-Green Counties, Item No. 4-128.00
Reconstruction of KY 61 from Columbia to Greensburg

Functional Classification	Rural Minor Arterial
State System	State Primary (Other)
Defense Highway System	Yes
NHS	No
National Truck Network	No
Truck Weight Class	AA
Type of Terrain	Rolling
# of Bridges	2

Type Road	
MP 0.000 to MP 8.650	Undivided
MP 8.650 to MP 9.010	Divided (flush median)
MP 9.010 to MP 9.551	Undivided
MP 9.551 to MP 9.796	Divided (flush median)
Pavement Type	High Flexible
Bike Route	MP 8.194 - MP 9.796

Begin MP	End MP	Length (Miles)	2000 ADT	Annual Growth Rate	2025 ADT	% Trucks	Number of Lanes	Lane Width (Feet)	Shoulder Width (Feet)	% Passing Sight Distance	Speed Limit (MPH)	2000 LOS	2025 LOS
0.000	0.290	0.290	1,240	2.0%	2,030	10.4**	2	9	1	10	55	A	B
0.290	4.053	3.763	1,490	2.0%	2,440	10.4**	2	9	1	10	55	A	B
4.053	4.763	0.710	2,390	2.0%	3,920	10.4**	2	9	1	10	55	B	C
4.763	6.117	1.354	2,390	2.0%	3,920	10.4**	2	9	1	0	55	B	C
6.117	8.194	2.077	3,600	2.0%	5,910	10.4**	2	9	1	0	55	C	C
8.194	8.330	0.136	3,370	2.0%	5,530	10.6*	2	11	7	N / A	55	B	B
8.330	8.520	0.190	3,370	2.0%	5,530	10.6*	3	11	7	N / A	55	B	B
8.520	8.618	0.098	3,370	2.0%	5,530	10.6*	4	11	7	N / A	55	A	B
8.618	8.905	0.287	3,610	2.0%	5,920	10.6*	4	11	7	N / A	55	A	B
8.905	9.010	0.105	5,370	2.0%	8,810	7.8	4	11	7	N / A	55	A	B
9.010	9.020	0.010	5,370	2.0%	8,810	7.8	2	11	7	N / A	55	B	C
9.020	9.551	0.531	5,370	2.0%	8,810	7.8	2	11	10	N / A	55	B	C
9.551	9.722	0.171	5,370	2.0%	8,810	7.8	3	11	8	N / A	55	B	C
9.722	9.796	0.074	5,370	2.0%	8,810	7.8	4	11	8	N / A	55	A	B

* Indicates an adjustment has been made

**Indicates value was obtained from HIS data files

Table 1. Systems, Traffic, and Geometric Data (continued)

Green County
US 68, M.P. 6.099 (at KY 218) to M.P. 18.411 (at Taylor County Line)

Adair-Green Counties, Item No. 4-128.00
Reconstruction of KY 61 from Columbia to Greensburg

Functional Classification	
MP 6.099 to MP 11.954	Rural Major Collector
MP 11.954 to MP 14.287	Rural Minor Arterial
MP 14.287 to MP 18.411	Rural Major Collector
State System	
MP 6.099 to MP 11.954	State Secondary
MP 11.954 to MP 14.287	State Primary (Other)
MP 14.287 to MP 18.411	State Secondary
Defense Highway System	Yes
NHS	No
National Truck Network	
MP 6.099 to MP 16.628	No
MP 16.628 to MP 18.411	Yes
Truck Weight Class	AAA
Type Road	
MP 6.099 to MP 12.060	Undivided
MP 12.060 to MP 12.800	Divided (flush median)
MP 12.800 to MP 13.270	Undivided
MP 13.270 to MP 13.536	Divided (flush median)
MP 13.536 to MP 14.200	Undivided
MP 14.200 to MP 14.530	Divided (flush median)
MP 14.530 to MP 18.411	Undivided
Type of Terrain	Rolling
# of Bridges	3
Pavement Type	High Flexible
Scenic Byway	MP 11.954 - MP 18.411

Table 1. Systems, Traffic, and Geometric Data (continued)

Green County
US 68, M.P. 6.099 (at KY 218) to M.P. 18.411 (at Taylor County Line)

Adair-Green Counties, Item No. 4-128.00
Reconstruction of KY 61 from Columbia to Greensburg

Begin MP	End MP	Length (Miles)	2000 ADT	Annual Growth Rate	2025 ADT	% Trucks	Number of Lanes	Lane Width (Feet)	Shoulder Width (Feet)	% Passing Sight Distance	Speed Limit (MPH)	2000 LOS	2025 LOS
6.099	10.552	4.453	3,410	1.5%	4,950	6.1**	2	9	3	0	55	C	C
10.552	10.750	0.198	3,410	1.5%	4,950	6.1**	2	10	12	0	55	C	C
10.750	10.889	0.139	3,410	1.5%	4,950	6.1**	2	10	9	0	55	C	C
10.889	10.956	0.067	3,410	1.5%	4,950	6.1**	2	9	9	0	55	C	C
10.956	11.954	0.998	3,410	1.5%	4,950	6.1**	2	9	3	0	55	C	C
11.954	11.989	0.035	7,630	1.5%	11,100	7.8	2	9	3	17	55	C	D
11.989	12.132	0.143	7,630	1.5%	11,100	7.8	2	11	3	N / A	55	C	D
12.132	12.190	0.058	8,810	1.5%	12,800	7.8	2	11	3	N / A	55	C	D
12.190	12.400	0.210	8,810	1.5%	12,800	7.8	2	11	3	N / A	45	C	D
12.400	12.789	0.389	16,000	1.5%	23,200	7.8	2	11	3	N / A	45	D	E
12.789	13.010	0.221	16,000	1.5%	23,200	7.8	2	11	10	N / A	45	D	E
13.010	13.120	0.110	16,000	1.5%	23,200	7.8	2	11	3	N / A	45	D	E
13.120	13.273	0.153	16,000	1.5%	23,200	7.8	2	11	3	N / A	35	D	E
13.273	13.385	0.112	16,000	1.5%	23,200	7.8	2	11	2	N / A	35	D	E
13.385	13.536	0.151	10,500	1.5%	15,200	7.8	2	11	2	N / A	35	C	D
13.536	13.616	0.080	11,800	1.5%	17,100	7.8	4	12	2	N / A	35	B	C
13.616	13.645	0.029	11,880	1.5%	17,200	7.8	4	12	2	N / A	35	B	C
13.645	13.690	0.045	9,540	1.5%	13,800	4.9**	4	12	2	N / A	35	B	B
13.690	13.810	0.120	9,540	1.5%	13,800	4.9**	4	12	2	N / A	45	B	B
13.810	14.091	0.281	9,470	1.5%	13,700	4.9**	4	12	2	N / A	45	B	B
14.091	14.287	0.196	9,470	1.5%	13,700	4.9**	4	12	10	N / A	45	B	B
14.287	14.400	0.113	6,960	1.5%	10,100	7.5	3	12	10	N / A	45	C	C
14.400	14.463	0.063	6,960	1.5%	10,100	7.5	2	12	10	N / A	45	C	D
14.463	15.586	1.123	6,960	1.5%	10,100	7.5	2	12	10	N / A	55	C	D
15.586	18.411	2.825	6,960	1.5%	10,100	7.5	2	12	10	40	55	C	D

**Indicates value was obtained from HIS data files

Table 1. Systems, Traffic, and Geometric Data (continued)

Green County
KY 417, M.P. 0.000 to M.P. 3.082 (Grissom Road)

Adair-Green Counties, Item No. 4-128.00
Reconstruction of KY 61 from Columbia to Greensburg

Functional Classification	Rural Local
State System	Rural Secondary
Defense Highway System	No
NHS	No
National Truck Network	No
Truck Weight Class	A
Type Road	Undivided
Type of Terrain	Rolling
# of Bridges	1
Pavement Type	Mixed Bituminous
Bike Route	MP 0.000 - MP 3.082

Begin MP	End MP	Length (Miles)	2000 ADT	Annual Growth Rate	2025 ADT	% Trucks	Number of Lanes	Lane Width (Feet)	Shoulder Width (Feet)	% Passing Sight Distance	Speed Limit (MPH)	2000 LOS	2025 LOS
0.000	0.160	0.160	4,290	1.5%	6,220	10.5	2	11	2	N / A	35	C	D
0.160	0.390	0.230	3,200	1.5%	4,640	10.5	2	11	2	N / A	35	C	D
0.390	0.445	0.055	3,200	1.5%	4,640	10.5	2	11	2	N / A	55	C	D
0.445	0.590	0.145	3,200	1.5%	4,640	10.5	2	10	3	N / A	55	C	C
0.590	1.640	1.050	1,630	1.5%	2,370	10.5	2	10	3	N / A	55	B	C
1.640	3.082	1.442	367	1.5%	532	10.5	2	10	3	N / A	55	A	A

Table 1. Systems, Traffic, and Geometric Data (continued)

Green County
KY 487, M.P. 6.323 (at Omar Sullivan Lane) to M.P.9.977 (at KY 61)
Adair-Green Counties, Item No. 4-128.00
Reconstruction of KY 61 from Columbia to Greensburg

Functional Classification	Rural Minor Collector
State System	Rural Secondary
Defense Highway System	No
NHS	No
National Truck Network	No
Truck Weight Class	A
Type Road	Undivided
Type of Terrain	Rolling
# of Bridges	1
Pavement Type	Mixed Bituminous

Begin MP	End MP	Length (Miles)	2000 ADT	Annual Growth Rate	2025 ADT	% Trucks	Number of Lanes	Lane Width (Feet)	Shoulder Width (Feet)	% Passing Sight Distance	Speed Limit (MPH)	2000 LOS	2025 LOS
6.323	8.808	2.485	179	1.5%	260	9.4	2	9	3	N / A	55	A	A
8.808	9.977	1.169	256	1.5%	371	9.4	2	9	3	N / A	55	A	A

Table 1. Systems, Traffic, and Geometric Data (continued)

Green County
KY 565, M.P. 0.000 to M.P. 2.978 (at KY 1913)

Adair-Green Counties, Item No. 4-128.00
Reconstruction of KY 61 from Columbia to Greensburg

Functional Classification	Rural Minor Collector
State System	Rural Secondary
Defense Highway System	No
NHS	No
National Truck Network	No
Truck Weight Class	A
Type Road	Undivided
Type of Terrain	Rolling
# of Bridges	None
Pavement Type	Mixed Bituminous
Bike Route	MP 1.836 - MP 6.148

Begin MP	End MP	Length (Miles)	2000 ADT	Annual Growth Rate	2025 ADT	% Trucks	Number of Lanes	Lane Width (Feet)	Shoulder Width (Feet)	% Passing Sight Distance	Speed Limit (MPH)	2000 LOS	2025 LOS
0.000	2.978	2.978	602	1.5%	873	9.4	2	9	3	N / A	55	A	B

Table 1. Systems, Traffic, and Geometric Data (continued)

Green County
KY 767, M.P. 0.000 to M.P. 1.421 (at Adair County Line)

Adair-Green Counties, Item No. 4-128.00
Reconstruction of KY 61 from Columbia to Greensburg

Functional Classification	Rural Minor Collector
State System	Rural Secondary
Defense Highway System	No
NHS	No
National Truck Network	No
Truck Weight Class	A
Type Road	Undivided
Type of Terrain	Rolling
# of Bridges	None
Pavement Type	Mixed Bituminous
Bike Route	MP 1.242 - MP 1.421

Begin MP	End MP	Length (Miles)	2000 ADT	Annual Growth Rate	2025 ADT	% Trucks	Number of Lanes	Lane Width (Feet)	Shoulder Width (Feet)	% Passing Sight Distance	Speed Limit (MPH)	2000 LOS	2025 LOS
0.000	1.421	1.421	236	1.5%	342	9.4	2	9	4	N / A	55	A	A

Table 2. Bridge Data

Adair-Green Counties, Item No.4-128.00
Reconstruction of KY 61 from Columbia to Greensburg

Route	County	Begin MP	End MP	Bridge MP	Bridge No.	Bridge Length (feet)	Total Bridge Width (feet)	Horizontal Clearance Curb-to-Curb (feet)	Sufficiency Rating	Structural[1] Function	Feature Crossed
US 68	Green	10.750	10.889	10.751	B00033	285.0	43.3	40.0	91.9		Russell Creek
	Green	10.956	11.954	11.740	B00011	77.0	21.6	19.0	62.7	F	Clover Lick Creek
	Green	12.789	13.100	12.989	B00010	691.0	31.8	26.4	53.2	F	Green River
KY 55	Adair	10.059	10.159	10.059	B00053	201.0	51.3	50.0	97.1		Louie B. Nunn Pkwy.
	Adair	11.655	11.700	11.657	B00052	172.0	36.0	26.0	66.8	F	Russell Creek
KY 61	Adair	7.850	12.879	8.803	B00017	45.0	20.0	19.0	71.1	F	Lynch Branch
	Adair	7.850	12.879	9.579	B00016	31.0	20.0	19.0	67.8	F	Brush Creek
	Adair	7.850	12.879	12.638	B00054	239.0	31.8	30.0	89.0		Louie B. Nunn Pkwy.
	Adair	12.879	14.252	14.252	B00020	171.0	20.1	19.0	70.6	F	Pettys Fork
	Adair	16.367	17.161	16.625	B00025	96.0	28.6	28.0	71.7		Pettys Fork Creek
	Adair	17.660	20.977	20.914	B00026	264.0	28.5	28.0	83.4		Russell Creek
	Green	0.290	4.053	2.192	B00009	96.0	21.5	19.0	63.9	F	Caney Fork
	Green	4.763	6.117	6.040	B00008	36.0	21.6	19.0	62.3	F	Clover Lick Creek
KY 417	Green	0.590	1.640	1.549	B00038	253.0	31.3	28.0	90.1		Green River
KY 487	Green	6.323	8.808	6.980	B00037	199.0	24.0	22.5	83.7		Russell Creek
KY 768	Adair	0.000	0.966	0.400	B00047	246.0	20.5	20.0	73.7	F	Russell Creek
	Adair	0.966	3.477	1.425	B00048	153.0	20.0	20.0	76.1	F	Big Creek

[1] S = Structurally Deficient, F = Functionally Obsolete

Table 3. Accident Data Analysis

Adair County
Segment Analysis

Adair-Green Counties, Item No. 4-128.00
Reconstruction of KY 61 from Columbia to Greensburg

Route	Begin MP	End MP	Length (Miles)	ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc Rate	Critical Acc Rate	Accidents				HMVM	Rates per HMVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
KY 55	6.700	9.335	2.635	2,900	2	U	R	236	358.959	1	6	11	18	0.11	8.96	53.78	98.60	161.34	0.45
	9.335	10.059	0.724	6,840	2	U	R	236	390.088	0	2	8	10	0.07	0.00	27.66	110.65	138.31	0.35
	10.059	10.316	0.257	13,500	2	U	R	236	421.700	0	1	10	11	0.05	0.00	19.74	197.42	217.16	0.51
	10.316	10.470	0.154	17,800	2	U	R	236	446.306	0	3	13	16	0.04	0.00	74.96	324.83	399.78	0.90
	10.470	10.614	0.144	21,000	2	U	R	236	435.661	0	9	39	48	0.04	0.00	203.85	883.34	1087.19	2.50
	10.614	10.720	0.106	25,400	2	U	R	236	448.317	0	0	6	6	0.04	0.00	0.00	152.64	152.64	0.34
	10.720	10.840	0.120	14,200	2	U	R	236	506.992	0	1	21	22	0.02	0.00	40.20	844.11	884.30	1.74
	10.840	11.170	0.330	15,000	2	U	R	236	390.124	1	3	20	24	0.07	13.84	41.51	276.74	332.09	0.85
	11.170	11.190	0.020	27,000	2	U	R	236	745.105	0	0	5	5	0.01	0.00	0.00	634.20	634.20	0.85
	11.190	11.200	0.010	13,600	2	U	R	236	1375.901	0	0	1	1	0.00	0.00	0.00	503.63	503.63	0.37
	11.200	11.519	0.319	16,500	2	U	R	236	385.260	0	9	17	26	0.08	0.00	117.12	221.22	338.33	0.88
	11.519	11.780	0.261	12,600	2	U	R	236	427.015	0	3	11	14	0.05	0.00	62.48	229.10	291.58	0.68
	11.780	12.849	1.069	10,400	2	U	R	236	337.305	3	13	18	34	0.16	18.48	80.09	110.89	209.47	0.62
Totals:			6.149							5	50	180	235						
KY 61	**7.850**	**12.879**	**5.029**	**2,260**	**2**	**U**	**R**	**236**	**336.160**	**1**	**6**	**15**	**22**	**0.17**	**6.03**	**36.16**	**90.40**	**132.58**	**0.39**
	12.879	**14.252**	**1.373**	**4,710**	**2**	**U**	**R**	**236**	**370.085**	**0**	**14**	**21**	**35**	**0.09**	**0.00**	**148.28**	**222.42**	**370.70**	**1.00**
	14.252	**14.830**	**0.578**	**4,960**	**2**	**U**	**R**	**236**	**441.374**	**0**	**2**	**0**	**2**	**0.04**	**0.00**	**47.78**	**0.00**	**47.78**	**0.11**
	14.830	**15.248**	**0.418**	**5,300**	**2**	**U**	**R**	**236**	**471.497**	**0**	**3**	**2**	**5**	**0.03**	**0.00**	**92.75**	**61.83**	**154.58**	**0.33**
	15.248	**15.670**	**0.422**	**6,060**	**2**	**U**	**R**	**236**	**454.193**	**0**	**5**	**2**	**7**	**0.04**	**0.00**	**133.92**	**53.57**	**187.48**	**0.41**
	15.670	**16.362**	**0.692**	**2,510**	**2**	**U**	**R**	**236**	**504.222**	**0**	**1**	**3**	**4**	**0.03**	**0.00**	**39.43**	**118.30**	**157.73**	**0.31**
	16.362	**17.660**	**1.298**	**2,390**	**2**	**U**	**R**	**236**	**432.986**	**0**	**1**	**3**	**4**	**0.05**	**0.00**	**22.08**	**66.24**	**88.32**	**0.20**
	17.660	**21.445**	**3.785**	**2,260**	**2**	**U**	**R**	**236**	**351.983**	**1**	**4**	**11**	**16**	**0.12**	**8.01**	**32.03**	**88.08**	**128.11**	**0.36**
	21.445	**23.997**	**2.552**	**1,240**	**2**	**U**	**R**	**236**	**430.931**	**1**	**4**	**2**	**7**	**0.05**	**21.64**	**86.58**	**43.29**	**151.51**	**0.35**
Totals:			**16.147**							**3**	**40**	**59**	**102**						
KY 80	11.775	11.820	0.045	12,900	2	U	R	236	724.852	0	0	2	2	0.01	0.00	0.00	235.98	235.98	0.33
	11.820	12.140	0.320	8,420	2	U	R	236	448.234	0	2	6	8	0.04	0.00	50.84	152.52	203.36	0.45
	12.140	12.282	0.142	9,670	2	U	R	236	540.431	1	0	16	17	0.02	49.88	0.00	798.09	847.97	1.57
	12.282	12.400	0.118	7,320	2	U	R	236	628.043	0	0	1	1	0.01	0.00	0.00	79.30	79.30	0.13
	12.400	12.980	0.580	4,960	2	U	R	236	440.999	0	2	0	2	0.04	0.00	47.62	0.00	47.62	0.11
Totals:			1.205							1	4	25	30						

Note: Accident Data from 1/1/96 to 12/31/99 obtained from HIS database. Procedure and Accident Rates from the Kentucky Transportation Center Research Report KTC-98-16 "Analysis of Traffic Accident Data in Kentucky (1993 - 1997)."

Table 3. Accident Data Analysis (continued)

Adair County

Segment Analysis

Adair-Green Counties, Item No. 4-128.00
Reconstruction of KY 61 from Columbia to Greensburg

Route	Begin MP	End MP	Length (Miles)	ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc Rate	Critical Acc Rate	Accidents				HMVM	Rates per HMVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
KY 439	0.000	0.760	0.760	1,090	2	U	R	236	637.177	1	1	5	7	0.01	82.68	82.68	413.41	578.77	0.91
	0.760	1.186	0.426	2,440	2	U	R	236	590.184	0	1	12	13	0.02	0.00	65.89	790.73	856.63	1.45
	1.186	1.560	0.374	3,930	2	U	R	236	529.443	0	1	4	5	0.02	0.00	46.60	186.40	233.00	0.44
	1.560	1.670	0.110	5,900	2	U	R	236	695.308	0	3	4	7	0.01	0.00	316.61	422.15	738.76	1.06
	1.670	1.787	0.117	7,420	2	U	R	236	626.952	0	3	12	15	0.01	0.00	236.69	946.76	1183.45	1.89
Totals:			1.787							1	9	37	47						
KY 532	0.000	1.415	1.415	30	2	U	R	236	2632.346	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	1.415	2.302	0.887	179	2	U	R	236	1273.630	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
Totals:			2.302							0	0	0	0						
KY 767	0.000	0.220	0.220	1,760	2	U	R	236	850.776	0	0	0	0	0.01	0.00	0.00	0.00	0.00	0.00
	0.220	1.068	0.848	908	2	U	R	236	653.714	0	0	4	4	0.01	0.00	0.00	355.82	355.82	0.54
Totals:			1.068							0	0	4	4						
KY 768	0.000	0.966	0.966	795	2	U	R	236	654.320	0	0	2	2	0.01	0.00	0.00	178.37	178.37	0.27
	0.966	3.477	2.511	595	2	U	R	236	526.866	1	2	1	4	0.02	45.84	91.69	45.84	183.38	0.35
Totals:			3.477							1	2	3	6						
KY 2973	0.000	1.385	1.385	492	2	U	R	236	683.009	0	0	0	0	0.01	0.00	0.00	0.00	0.00	0.00
Totals:			1.385							0	0	0	0						

Note: Accident Data from 1/1/96 to 12/31/99 obtained from HIS database. Procedure and Accident Rates from the Kentucky Transportation Center Research Report KTC-98-16 "Analysis of Traffic Accident Data in Kentucky (1993 - 1997)."

Table 3. Accident Data Analysis (continued)

Green County

Segment Analysis

Adair-Green Counties, Item No. 4-128.00
Reconstruction of KY 61 from Columbia to Greensburg

Route	Begin MP	End MP	Length (Miles)	ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc Rate	Critical Acc Rate	Accidents				HMVM	Rates per HMVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
US 68	6.099	11.954	5.855	3,410	2	U	R	236	311.012	1	13	39	53	0.29	3.43	44.60	133.79	181.82	0.58
	11.954	12.132	0.178	7,630	2	U	R	236	542.246	0	0	0	0	0.02	0.00	0.00	0.00	0.00	0.00
	12.132	12.400	0.268	8,810	2	U	R	236	463.647	0	0	0	0	0.03	0.00	0.00	0.00	0.00	0.00
	12.400	13.385	0.985	16,000	2	U	R	236	320.672	0	3	6	9	0.23	0.00	13.04	26.08	39.11	0.12
	13.385	13.536	0.151	10,500	2	U	R	236	517.701	0	2	4	6	0.02	0.00	86.40	172.80	259.20	0.50
	13.536	13.645	0.109	11,800	4	U	R	208	505.737	0	4	6	10	0.02	0.00	213.01	319.51	532.52	1.05
	13.645	13.810	0.165	9,540	4	U	R	208	474.823	0	1	1	2	0.02	0.00	43.51	43.51	87.03	0.18
	13.810	14.200	0.390	9,470	4	U	R	208	377.263	0	0	0	0	0.05	0.00	0.00	0.00	0.00	0.00
	14.200	14.287	0.087	9,470	4	D	R	109	395.783	0	1	3	4	0.01	0.00	83.13	249.40	332.54	0.84
	14.287	14.400	0.113	6,960	3	U	R	257	685.927	0	0	4	4	0.01	0.00	0.00	348.35	348.35	0.51
	14.400	18.411	4.011	6,960	2	U	R	236	299.213	0	16	25	41	0.41	0.00	39.26	61.34	100.59	0.34
Totals:			12.312							1	40	88	129						
KY 61	**0.000**	**0.290**	**0.290**	**1,240**	**2**	**U**	**R**	**236**	**877.390**	**0**	**0**	**0**	**0**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
	0.290	**4.053**	**3.763**	**1,490**	**2**	**U**	**R**	**236**	**380.422**	**1**	**9**	**16**	**26**	**0.08**	**12.22**	**109.94**	**195.45**	**317.61**	**0.83**
	4.053	**6.117**	**2.064**	**2,390**	**2**	**U**	**R**	**236**	**390.402**	**0**	**7**	**11**	**18**	**0.07**	**0.00**	**97.19**	**152.73**	**249.93**	**0.64**
	6.117	**8.194**	**2.077**	**3,600**	**2**	**U**	**R**	**236**	**360.352**	**1**	**18**	**13**	**32**	**0.11**	**9.16**	**164.88**	**119.08**	**293.13**	**0.81**
	8.194	**8.330**	**0.136**	**3,370**	**2**	**U**	**R**	**236**	**794.494**	**1**	**0**	**1**	**2**	**0.01**	**149.44**	**0.00**	**149.44**	**298.89**	**0.38**
	8.330	**8.520**	**0.190**	**3,370**	**3**	**U**	**R**	**257**	**737.600**	**0**	**0**	**2**	**2**	**0.01**	**0.00**	**0.00**	**213.94**	**213.94**	**0.29**
	8.520	**8.618**	**0.098**	**3,370**	**4**	**U**	**R**	**208**	**846.720**	**0**	**1**	**0**	**1**	**0.00**	**0.00**	**207.39**	**0.00**	**207.39**	**0.24**
	8.618	**8.650**	**0.032**	**3,610**	**4**	**U**	**R**	**208**	**1409.089**	**0**	**0**	**0**	**0**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
	8.650	**8.905**	**0.255**	**3,610**	**4**	**D**	**R**	**109**	**378.187**	**0**	**1**	**3**	**4**	**0.01**	**0.00**	**74.40**	**223.21**	**297.62**	**0.79**
	8.905	**9.551**	**0.646**	**5,370**	**2**	**U**	**R**	**236**	**421.714**	**0**	**3**	**7**	**10**	**0.05**	**0.00**	**59.23**	**138.21**	**197.44**	**0.47**
	9.551	**9.722**	**0.171**	**5,370**	**3**	**U**	**R**	**257**	**650.952**	**0**	**0**	**0**	**0**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
	9.722	**9.796**	**0.074**	**5,370**	**4**	**U**	**R**	**208**	**781.932**	**0**	**0**	**0**	**0**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Totals:			**9.796**							**3**	**39**	**53**	**95**						

Note: Accident Data from 1/1/96 to 12/31/99 obtained from HIS database. Procedure and Accident Rates from the Kentucky Transportation Center Research Report KTC-98-16 "Analysis of Traffic Accident Data in Kentucky (1993 - 1997)."

Table 3. Accident Data Analysis (continued)

Green County

Segment Analysis

Adair-Green Counties, Item No. 4-128.00
Reconstruction of KY 61 from Columbia to Greensburg

Route	Begin MP	End MP	Length (Miles)	ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc Rate	Critical Acc Rate	Accidents				HMVM	Rates per HMVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
KY 417	0.000	0.160	0.160	4,290	2	U	R	236	681.202	0	2	3	5	0.01	0.00	199.57	299.36	498.93	0.73
	0.160	0.590	0.430	3,200	2	U	R	236	540.089	0	2	5	7	0.02	0.00	99.55	248.88	348.44	0.65
	0.590	1.640	1.050	1,630	2	U	R	236	506.354	0	0	0	0	0.02	0.00	0.00	0.00	0.00	0.00
	1.640	3.082	1.442	367	2	U	R	236	750.917	0	1	1	2	0.01	0.00	129.42	129.42	258.85	0.34
Totals:			3.082							0	5	9	14						
KY 487	6.323	8.808	2.485	179	2	U	R	236	804.052	0	0	0	0	0.01	0.00	0.00	0.00	0.00	0.00
	8.808	9.977	1.169	256	2	U	R	236	949.121	0	1	0	1	0.00	0.00	228.87	0.00	228.87	0.24
Totals:			3.654							0	1	0	1						
KY 565	0.000	2.978	2.978	602	2	U	R	236	499.707	0	3	3	6	0.03	0.00	114.62	114.62	229.23	0.46
Totals:			2.978							0	3	3	6						
KY 767	0.000	1.421	1.421	236	2	U	R	236	903.672	0	0	1	1	0.00	0.00	0.00	204.24	204.24	0.23
Totals:			1.421							0	0	1	1						

Note: Accident Data from 1/1/96 to 12/31/99 obtained from HIS database. Procedure and Accident Rates from the Kentucky Transportation Center Research Report KTC-98-16 "Analysis of Traffic Accident Data in Kentucky (1993 - 1997)."

Table 3. Accident Data Analysis (continued)

Adair County
0.1 Mile Spot Analysis

Adair-Green Counties, Item No. 4-128.00
Reconstruction of KY 61 from Columbia to Greensburg

Route	Begin MP	End MP	Length (Miles)	ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc Rate	Critical Acc Rate	Accidents				MVM	Rates per MVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
KY 55	10.244	10.344	0.100	15,650	2	U	R	0.4	0.763	0	2	12	14	22.85	0.00	0.09	0.53	0.61	0.80
	10.400	10.500	0.100	19,400	2	U	R	0.4	0.724	0	10	22	32	28.32	0.00	0.35	0.78	1.13	1.56
	10.514	10.614	0.100	21,000	2	U	R	0.4	0.711	0	1	27	28	30.66	0.00	0.03	0.88	0.91	1.29
	10.652	10.752	0.100	19,800	2	U	R	0.4	0.720	0	1	18	19	28.91	0.00	0.03	0.62	0.66	0.91
	11.070	11.170	0.100	15,000	2	U	R	0.4	0.771	0	1	11	12	21.90	0.00	0.05	0.50	0.55	0.71
	11.170	11.270	0.100	18,200	2	U	R	0.4	0.735	0	2	11	13	26.57	0.00	0.08	0.41	0.49	0.67
	11.486	11.586	0.100	14,550	2	U	R	0.4	0.777	0	6	9	15	21.24	0.00	0.28	0.42	0.71	0.91
	11.700	11.800	0.100	11,500	2	U	R	0.4	0.827	0	2	8	10	16.79	0.00	0.12	0.48	0.60	0.72
KY 61	**13.700**	**13.800**	**0.100**	**4,710**	**2**	**U**	**R**	**0.4**	**1.094**	**0**	**4**	**8**	**12**	**6.88**	**0.00**	**0.58**	**1.16**	**1.75**	**1.60**
	13.800	**13.900**	**0.100**	**4,710**	**2**	**U**	**R**	**0.4**	**1.094**	**0**	**3**	**4**	**7**	**6.88**	**0.00**	**0.44**	**0.58**	**1.02**	**0.93**
	13.952	**14.052**	**0.100**	**4,710**	**2**	**U**	**R**	**0.4**	**1.094**	**0**	**3**	**5**	**8**	**6.88**	**0.00**	**0.44**	**0.73**	**1.16**	**1.06**
	15.200	**15.300**	**0.100**	**5,680**	**2**	**U**	**R**	**0.4**	**1.026**	**0**	**4**	**3**	**7**	**8.29**	**0.00**	**0.48**	**0.36**	**0.84**	**0.82**
	21.355	**21.455**	**0.100**	**2,260**	**2**	**U**	**R**	**0.4**	**1.448**	**1**	**2**	**1**	**4**	**3.30**	**0.30**	**0.61**	**0.30**	**1.21**	**0.84**
KY 80	12.236	12.336	0.100	8,495	2	U	R	0.4	0.903	1	0	10	11	12.40	0.08	0.00	0.81	0.89	0.98
KY 439	0.672	0.772	0.100	1,765	2	U	R	0.4	1.609	0	0	4	4	2.58	0.00	0.00	1.55	1.55	0.96
	0.986	1.086	0.100	2,440	2	U	R	0.4	1.404	0	0	6	6	3.56	0.00	0.00	1.68	1.68	1.20
	1.086	1.186	0.100	2,440	2	U	R	0.4	1.404	0	0	4	4	3.56	0.00	0.00	1.12	1.12	0.80
	1.687	1.787	0.100	7,420	2	U	R	0.4	0.941	0	3	12	15	10.83	0.00	0.28	1.11	1.38	1.47

Note: Accident Data from 1/1/96 to 12/31/99 obtained from HIS database.
Procedure and Accident Rates from the Kentucky Transportation Center Research Report KTC-98-16 "Analysis of Traffic Accident Data in Kentucky (1993 - 1997)."

Table 3. Accident Data Analysis (continued)

Green County
0.1 Mile Spot Analysis

Adair-Green Counties, Item No. 4-128.00
Reconstruction of KY 61 from Columbia to Greensburg

Route	Begin MP	End MP	Length (Miles)	ADT	Number of Lanes	Divided/ Undivided	Rural/ Urban	Avg. Acc Rate	Critical Acc Rate	Accidents				MV	Rates per MVM				Critical Rate Factor
										Fatal	Injury	PDO	Total		Fatal	Injury	PDO	Total	
US 68	11.854	11.954	0.100	3,410	2	U	R	0.4	1.231	0	0	7	7	4.98	0.00	0.00	1.41	1.41	1.14
	13.317	13.417	0.100	13,250	2	U	R	0.4	0.796	0	4	6	10	19.35	0.00	0.21	0.31	0.52	0.65
	13.516	13.616	0.100	11,800	4	U	R	2.85	3.927	0	4	6	10	17.23	0.00	0.23	0.35	0.58	0.15
KY 61	**4.000**	**4.100**	**0.100**	**1,940**	**2**	**U**	**R**	**0.4**	**1.545**	**0**	**3**	**6**	**9**	**2.83**	**0.00**	**1.06**	**2.12**	**3.18**	**2.06**
	4.700	**4.800**	**0.100**	**2,390**	**2**	**U**	**R**	**0.4**	**1.415**	**0**	**1**	**4**	**5**	**3.49**	**0.00**	**0.29**	**1.15**	**1.43**	**1.01**
	8.096	**8.196**	**0.100**	**3,485**	**4**	**U**	**R**	**2.85**	**4.876**	**0**	**5**	**7**	**12**	**5.09**	**0.00**	**0.98**	**1.38**	**2.36**	**0.48**
KY 417	0.000	0.100	0.100	4,290	2	U	R	0.4	1.131	0	2	3	5	6.26	0.00	0.32	0.48	0.80	0.71
	0.106	0.206	0.100	3,745	2	U	R	0.4	1.188	0	2	3	5	5.47	0.00	0.37	0.55	0.91	0.77

Note: Accident Data from 1/1/96 to 12/31/99 obtained from HIS database.

Table 4. Six Year Plan Improvements

Adair-Green Counties, Item No. 4-128.00
Reconstruction of KY 61 from Columbia to Greensburg

Route/ Location	Item Number	Limits	Length (mi.)	Scope of Work	Description	Phase*	Fiscal Year	Amount
KY 55	08-159.00	N/A	5.3	Bypass	Western Bypass of Columbia (G&D Only)	R	2001	$5,000,000
						U	2001	$1,500,000
						C	2003	$13,250,000
KY 55	08-159.01	N/A	5.3	Surface	Western Bypass of Columbia (Surfacing)	C	2004	$4,500,000
							Total	$24,250,000
KY 61	08-162.10	MP 6.1 to MP 12.45	6.35	Reconstruction	Reconstruct KY 61 from Sparksville to 1000 feet south of Cumberland Pkwy. (Section 1)	R	2002	$3,000,000
						U	2003	$1,200,000
						C	2004	$13,850,000
							Total	$18,050,000
KY 61	08-162.60	MP 12.45 to MP 14.583	2.1	Reconstruction	Reconstruct KY 61 from 1000 feet south of Cumberland Pkwy to Columbia Bypass (Section 2) (Includes new interchange at the Cumberland Pkwy)	R	2002	$2,000,000
						U	2004	$500,000
						C	2005	$13,650,000
							Total	$16,150,000
KY 61	04-120.01	N/A	1.8	New Route	East Bypass of Greensburg	R	2002	$400,000
						U	2002	$200,000
						C	2003	$2,000,000
							Total	$2,600,000
KY 61	04-128.00	MP 0.000 to MP 8.194 (Green Co.) & MP 15.24 to MP 23.997 (Adair Co.)	19.0	Scoping Study	Study the Relocation of KY 61 from Greensburg to Columbia	P	2001	$250,000
KY 61	04-128.10	MP 0.000 to MP 8.194 (Green Co.) & MP 15.24 to MP 23.997 (Adair Co.)	N/A	Reconstruction	Greensburg to Columbia Priority Section	D	2002	$750,000
							Total	$1,000,000
New Connector	04-310.00	N/A	5.0	New Route	Construct New Connector from KY 61 south of Oak Ridge Road to KY 210 north of KY 1192 in Larue County	D	2003	$1,000,000
						R	2005	$6,500,000
						U	2006	$3,000,000
							Total	$10,500,000

* P=Planning, D=Design, R=Right-of-Way, U=Utility Relocation, and C=Construction.

Table 5. Environmental Justice Data

Adair-Green Counties, Item No. 4-128.00
Reconstruction of KY 61 from Columbia to Greensburg

Population 65 Years and Older Comparison		
	Total Age 65 and Over	% Age 65 and Over
Kentucky	466,845	12.7
Adair County	2,409	15.7
Tract 970100	188	14
Tract 970200	170	14.4
Block Group 970200-1	170	14.4
Tract 970300	354	14.1
Tract 970400	1,252	18.1
Block Group 970400-1	228	15.5
Block Group 970400-2	171	17
Block Group 970400-3	204	19.1
Block Group 970400-4	315	33.8
Block Group 970400-5	217	16.7
Block Group 970400-6	117	14.6
Tract 970500	291	13.4
Block Group 970500-1	139	12.3
Block Group 970500-2	152	14.4
Tract 970600	154	12.3
Green County	1,857	17.9
Tract 990100	410	15.2
Tract 990200	865	21.2
Block Group 990200-1	139	14
Block Group 990200-2	189	21.1
Block Group 990200-3	148	29.7
Block Group 990200-4	166	18.9
Block Group 990200-5	223	27.4
Tract 990300	326	16
Tract 990400	403	26.1
Block Group 990400-1	147	18
Block Group 990400-2	109	15

Poverty Rate Comparison		
	Total Persons in Poverty	% Persons in Poverty
Kentucky	681,827	18.5
Adair County	3,744	24.4
Tract 970100	421	31.4
Tract 970200	119	10.1
Block Group 970200-1	119	10.1
Tract 970300	724	28.8
Tract 970400	1,355	19.6
Block Group 970400-1	399	22
Block Group 970400-2	151	15
Block Group 970400-3	111	10.4
Block Group 970400-4	194	20.8
Block Group 970400-5	367	28.2
Block Group 970400-6	133	16.6
Tract 970500	722	33.1
Block Group 970500-1	348	30.9
Block Group 970500-2	403	38.2
Tract 970600	374	30.7
Green County	2,188	21.1
Tract 990100	551	20.4
Tract 990200	920	22.5
Block Group 990200-1	148	14.9
Block Group 990200-2	238	26.5
Block Group 990200-3	108	21.7
Block Group 990200-4	293	33.3
Block Group 990200-5	133	16.3
Tract 990300	469	23
Tract 990400	248	16.1
Block Group 990400-1	54	6.6
Block Group 990400-2	194	26.8

Minority Population Comparison		
	Total Minorities	Minority % of Population
Kentucky	292,681	7.9
Adair County	507	3.3
Tract 970100	23	1.5
Tract 970200	49	3.8
Block Group 970200-1	49	3.8
Tract 970300	24	0.68
Tract 970400	372	5.4
Block Group 970400-1	17	0.14
Block Group 970400-2	19	1.9
Block Group 970400-3	82	7.7
Block Group 970400-4	135	14.5
Block Group 970400-5	96	7.4
Block Group 970400-6	23	2.9
Tract 970500	39	1.8
Block Group 970500-1	19	1.7
Block Group 970500-2	20	1.9
Tract 970600	16	1.3
Green County	383	3.7
Tract 990100	61	3.7
Tract 990200	253	6.2
Block Group 990200-1	39	3.9
Block Group 990200-2	58	6.5
Block Group 990200-3	47	9.4
Block Group 990200-4	68	7.7
Block Group 990200-5	41	5
Tract 990300	1	0.05
Tract 990400	68	4.4
Block Group 990400-1	57	6.9
Block Group 990400-2	11	1.5

Table 6. Evaluation Criteria

Adair-Green Counties, Item No. 4-128.00
Reconstruction of KY 61 from Columbia to Greensburg

Project Length & Cost				
Alternative	**1**	**2**	**3**	**4**
Length (miles)	7.35	16.30	15.62	17.27
Cost (millions)				
Design	$ 2.40	$ 3.10	$ 5.10	$ 5.50
Right-of-Way	$ 2.87	$ 3.61	$ 8.22	$ 9.04
Utilities	$ 1.92	$ 2.41	$ 2.06	$ 2.26
Construction	$ 14.70	$ 19.18	$ 31.24	$ 34.54
Bridges	$ 2.08	$ 2.08	$ 4.66	$ 4.66
Total	$ 23.97	$ 30.38	$ 51.28	$ 56.00
per Mile	$ 3.26	$ 1.86	$ 3.28	$ 3.24

Traffic Served				
Alternative	**1**	**2**	**3**	**4**
Average Traffic Served				
Year 2000 (AADT)	2,120	2,140	2,240	2,280
Year 2000 (VMT)	7,791	33,416	34,978	37,745
Year 2025 (AADT)	3,480	3,510	3,680	3,750
Year 2025 (VMT)	12,789	54,809	57,463	62,081

Environmental Summary (within 2000' corridor)				
Alternative	**1**	**2**	**3**	**4**
Cultural Sites				
Churches	1	2	1	1
Cemeteries	1	2	0	0
Airports	0	0	0	1
Environmental Concerns				
ERNS (Emergency Response Notification System)	1	3	1	1
PCS (Permit Compliance System)			1	1
AIFS-AIRS (Aeromatic Information Facility Subsystem - Aeromatic Information Facility System)	3	3	3	3
Permitted Landfills	1	1	1	1
Underground Storage Tanks	20	29	22	22
FIND (Facility Identification Initiative System)	0	5	0	0
Geologic Information				
Oil & Gas Wells	3	8	9	9
Waterwells	4	13	10	10
Water Guages	1	1	1	1
Historical & Archaeological Sites				
Archaeological Sites	1	2	2	4
Historical Structures	4	5	4	7
Hydrology				
Wetlands (acres)	13.0	17.7	17.3	19.5
Blue-Line Streams 1-4 (miles)	10.7	14.3	15.7	16.1
Blue-Line Streams 5-9 (miles)	0.3	0.4	0.4	0.4
Dams	0	0	0	1
Other Environmental Concerns				
Houses and Primary Structures	416	736	470	500
Antenna Structures	0	1	0	1

[1] Traffic Served = Average Traffic along Existing Corridor x Length of Improvement

Table 7. Cost Estimates by County

Adair-Green Counties, Item No. 4-128.00
Reconstruction of KY 61 from Columbia to Greensburg

Alternate	Length (miles)	Cost Items (million $)[1]					Total Cost (million $)[1]	
		Construction	Bridges	Design	Right-of-Way	Utilities	Project	Per Mile
Adair County								
No. 1	3.10	6.20	1.04	1.00	1.26	0.84	10.34	3.34
No. 2	7.77	8.54	1.04	1.40	1.63	1.08	13.69	1.76
No. 3	7.74	15.48	2.59	2.60	4.11	1.03	25.81	3.33
No. 4	9.39	18.78	2.59	3.00	4.93	1.23	30.53	3.25
Green County								
No. 1	4.25	8.50	1.04	1.40	1.61	1.08	13.63	3.21
No. 2	8.53	10.64	1.04	1.70	1.99	1.32	16.69	1.96
No. 3	7.88	15.76	2.07	2.50	4.11	1.03	25.47	3.23
No. 4	7.88	15.76	2.07	2.50	4.11	1.03	25.47	3.23
Both Counties								
No. 1	7.35	14.70	2.08	2.40	2.87	1.92	23.97	3.26
No. 2	16.30	19.18	2.08	3.10	3.61	2.41	30.38	1.86
No. 3	15.62	31.24	4.66	5.10	8.22	2.06	51.28	3.28
No. 4	17.27	34.54	4.66	5.50	9.04	2.26	56.00	3.24

[1]Items have been rounded.

Table 8. Preferred Alternate Cost Estimates

Adair-Green Counties, Item No. 4-128.00
Reconstruction of KY 61 from Columbia to Greensburg

Priority	Segment	Begin Description	End Description	Length (miles)	Cost Items (million $)[1]					Total Cost (million $)[1]	
					Construction	Bridges	Design	Right-of-Way	Utilities	Project	Per Mile
Adair County											
2	No. 1	Columbia Bypass	Paxton Road	1.89	3.78	----	0.50	0.88	0.22	5.38	2.85
	No. 2	Paxton Road	Russell Crk	2.93	5.86	1.55	1.00	1.74	0.44	10.59	3.61
	No. 3	Russell Crk	County Line	2.91	5.82	1.04	1.00	1.55	0.39	9.80	3.37
4	No. 4	KY 61 tie	New KY 61 tie	1.66	3.32	----	0.50	0.74	0.18	4.74	2.86
Green County											
3	No. 1	County Line	Caney Fork	2.11	4.22	----	0.50	1.05	0.26	6.03	2.86
	No. 2	Caney Fork	KY 487	1.61	3.22	1.04	0.50	1.06	0.27	6.09	3.78
1	No. 3	KY 487	Clover Lick Crk.	1.80	3.60	----	0.50	0.83	0.21	5.14	2.86
	No. 4	Clover Lick Crk	US 68/KY 61	2.36	4.72	1.04	1.00	1.18	0.29	8.23	3.49
Both Counties											
	Total			17.27	34.54	4.67	5.50	9.03	2.26	56.00	3.24

[1]Items have been rounded.

APPENDIX C.
PHOTOGRAPHS OF PROJECT AREA

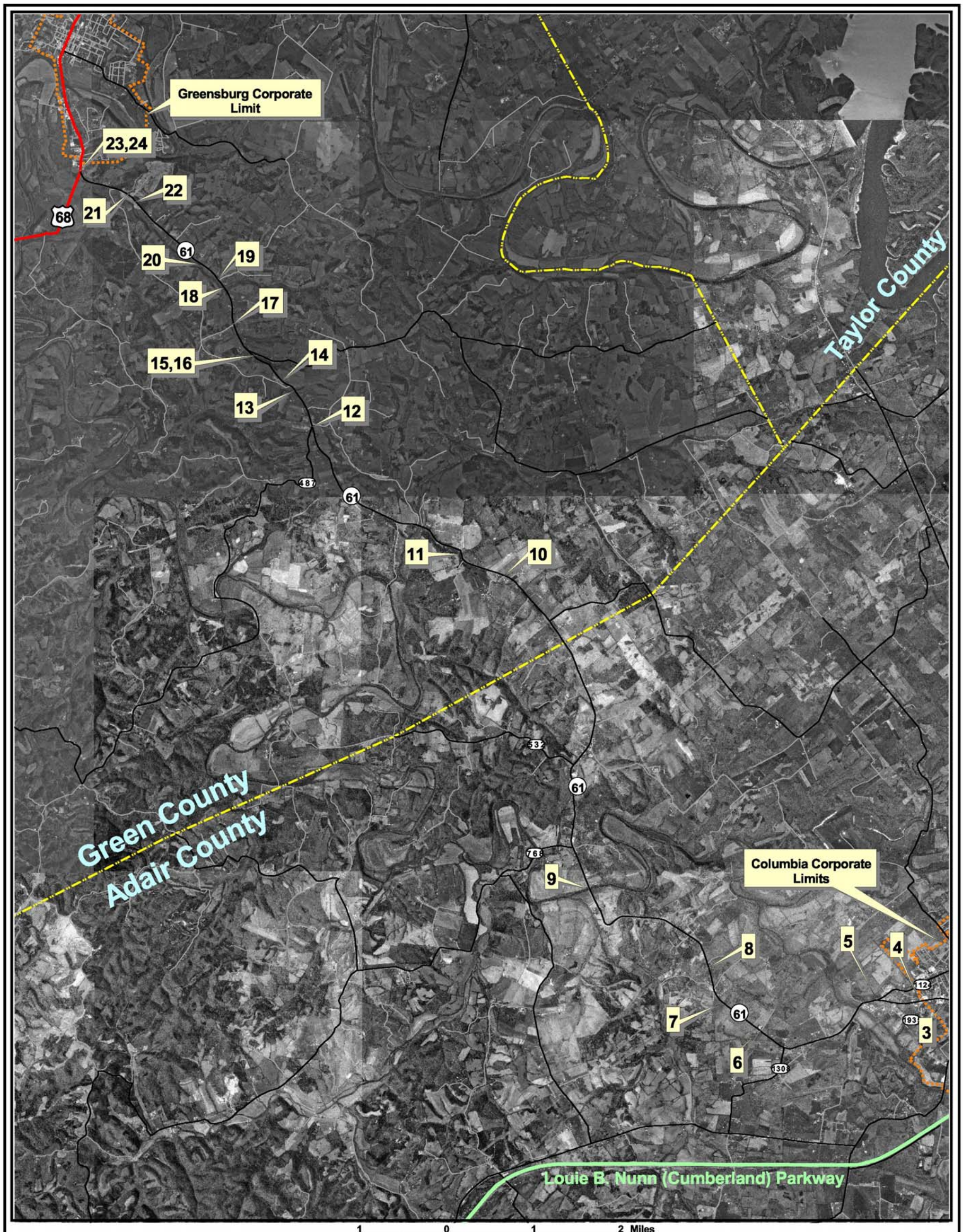


Photo Location Map

Photo 1. KY 61 southbound view toward KY 61/80/55 intersection, Columbia

Photo 4. Lumber yard along KY 61, Adair County, just west of Columbia

Photo 2. Northbound KY 61/80 view of 61/80/55 intersection, Columbia

Photo 5. KY 439/KY 61 intersection, Adair County

Photo 3. Development along KY 61 just west of Columbia, Adair County

Photo 6. KY 61 typical section, Adair County, mile 18.0

Photo 7. Church along KY 61, Adair County

Photo 10. Example of terrain along KY 61, Green County

Photo 8. Example of typical section along KY 61 northbound, Adair County, mile 19.0

Photo 11. KY 61 curve section, Green County, mile 2.0

Photo 9. KY 61 bridge section near Milltown, Adair County

Photo 12. KY 61/KY487 intersection, Green County

Photo 13. KY 61, Green County, mile 4.5

Photo 16. KY 61/KY 565 intersection, Green County

Photo 14. Logging operation along KY 61, Green County, mile 4.5

Photo 17. Example of structures along KY 61, Green County

Photo 15. KY 61, Green County, mile 5.0

Photo 18. KY 61 bridge section over Lick Creek, Green County

Photo 19. KY 61 typical section, Green County, mile 6.1

Photo 22. Rock quarry along KY 61 near Greensburg, Green County

Photo 20. Residential access points along KY 61, Green County, mile 6.5

Photo 23. KY 61 southbound looking away from KY 61/KY 70/US 68 intersection, Greensburg

Photo 21. Rock quarry entrance along KY 61 near Greensburg, Green County

Photo 24. KY 61/KY 70/US 68 southbound at junction, Greensburg

APPENDIX D.
PROJECT TEAM MEETING MINUTES

District Team Meeting Minutes

Scoping Study
KY 61, Greensburg to Columbia
(Item No. 4-128.00)
Adair and Green Counties
September 8, 2000

A project team meeting for the Scoping Study for KY 61 from Greensburg to Columbia (Item No. 4-128.00) was conducted on Friday, September 8, 2000 at 10:30 a.m. (CDT) in the Kentucky Transportation Cabinet (KYTC) Department of Highways District 4 office in Elizabethtown, Kentucky. The purpose of the meeting was to discuss the purpose, goals and objectives of the proposed project, to review preliminary existing condition data for the study corridor, and to identify future study needs. Participants at the meeting included representatives from KYTC District 4, KYTC Division of Planning, KYTC Division of Design, and consultant staff from Wilbur Smith Associates (WSA). Individual attendees at the meeting include the following:

Paul Sanders	KYTC District 4 Construction
Patty Dunaway	KYTC District 4 Planning
Tom Jobe	KYTC District 4 Operations
Sherrill Smith	KYTC District 4
Gary Raymer	KYTC District 4 Construction
David Matthews	KYTC District 4 Traffic
George Best	KYTC Highway Design
Carl Dixon	KYTC Planning
Ted Noe	KYTC Planning
Samantha Jones	WSA
Mike Merriman	WSA
Howard Beverly	WSA

A representative of District 8 in Somerset was invited but was unable to attend. A summary of the key comments and discussion items for this meeting is included below, organized according to the meeting agenda. Attached to these minutes is a copy of the agenda from this meeting.

1) Introduction and Purpose

Attendees were advised that the purpose of this and other future Intermediate Planning Studies was to better define the project prior to the design phase. The study is intended to help expedite the highway project development process and better meet the National Environmental Policy Act (NEPA) requirements. The task involved with this study include:

- Defining project goals
- Identifying projects termini and preferred corridors

- Initiating preliminary contacts with public officials and agencies
- Identifying preliminary environmental concerns
- Informing the public
- Identifying potential project opposition and support

2a) General Project Area

Attendees were provided with copies of a preliminary existing conditions summary that consisted of mapping and graphics for the area corridors. Included in this summary were the following items:

- Project Location Map
- HIS Data Summary
- Year 2000 Traffic Volume Map
- Accident Data Summary with Critical Rates
- Accident Location Map
- Topographic Map
- Environmental Footprint on an Aerial Photograph

Currently, this project is expected to provide a relocation/reconstruction of the KY 61 corridor from Columbia to Greensburg. As a scoping study, the results of this project will include recommended corridors for further examination.

2b) Available Data and Reports

Available reports include the KYTC's scoping study of a Columbia bypass, completed in 1990. WSA has been provided with a copy of this report.

David Beatty, Planning Engineer in District 8, completed the legislative request for this project and he may be able to provide additional background information on the project.

2c) Problems with Existing Roadway or Network

A number of problems along the existing KY 61 corridor were identified during the meeting discussions. These include:

- Dangerous intersections at both ends of the corridor
- Vertical and horizontal curves along portions of the route
- Safety concerns related to accident frequency
- Truck access and weight limit issues along the corridor

2d) Benefits of Proposed Project

Identified benefits related to the implementation of this project are based around solving the issues identified in Section 2c. Also, an improved road in this area would provide a AAA route to improve accessibility.

2e) Additional Information Needed

Additional information identified for this study includes the future traffic projections for the identification of an expected typical section.

2f) Logical Termini

The discussion of logical termini focused on the possibility of connecting the KY 61 corridor into KY 55 at some point north of Columbia. Under this plan, the northern terminus could remain at the existing intersection with US 68, or fall just north of the Greensburg limits on US 68. It was indicated that the both the US 68 and KY 55 corridors have been recently rebuilt and would provide adequate routes for additional KY 61 traffic. Bringing traffic into Columbia on KY 55 would also avoid the awkward intersection of KY 61 and US 68.

Another possibility identified for a southern terminus involves moving the existing KY 61 and US 68 interchange about ½ mile to the west. In this way, the current elevation change at the intersection could be eliminated.

2g) Project Goals and Objectives

For the KY 61 relocation project, several goals and objectives were identified and are summarized as follows:

- Improve safety along the route
- Provide an improved facility for truck traffic
- Improve the geometric qualities of the roadway

3) Possible Alternatives and Corridors

A number of potential alternatives were identified during the District meeting. The majority of the discussion focused on the possibility of three corridors:

- Along or near the existing alignment
- North of Greensburg to KY 55 near the Green River Lake
- South of Greensburg to KY 55 near the Green River Lake

Several other potential corridors were identified and drawn onto a large map during the meeting. WSA was provided a copy of this map.

4) Environmental Footprint Area

The environmental footprint area was determined to include an area that is at least:

- 1000-feet east of KY 55
- 1000-feet west of KY 61 from Greensburg to the Louie B. Nunn Parkway
- 1000-feet north of Greensburg

5) Probable Design Criteria

Probable design criteria for the proposed improvement include the following:

- Functional classification as a rural minor arterial
- Design speed of 60 mph
- Typical section to be based on future traffic projections (probably two-lanes initially with truck-climbing lanes)

6) Agency Coordination Needs

In addition to the list of potential agency contacts provided by the KYTC, a number of other local contacts were identified. Potential contacts include the Greensburg Industrial Foundation, the Columbia Industrial Foundation, school board, emergency services and the Corp of Engineers.

7) Public Involvement Needs

It is recommended that public involvement for this project be initiated in each county. Several potential locations for public meetings were identified including local schools.

8) Documentation and Reports

Finally, it was noted that documentation of this project would consist of the following:

- Minutes for each meeting
- Purpose and need information
- Environmental footprint
- Traffic data
- Identified corridor alternatives and analysis
- Public input
- Very concise summary reports

With no further comments, the meeting concluded at approximately 12:00 noon.

KY 61 Scoping Study, Adair & Green Counties
Item # 4-128.00

Project Goals and Objectives

This study considers the need for highway transportation improvements along the KY 61 corridor between Columbia and Greensburg in Adair and Green Counties (Item #4-128.00). According to the project description listed in the Six Year Highway Plan, the project will involve the relocation of the corridor KY 80 on the north side of Columbia to US 68 just south of Greensburg. The existing road presents a number of safety concerns, geometric deficiencies and high accident locations. Also, as a AA route, truck traffic in the area is often diverted to less direct routes. An improved route in this area would provide increased mobility for local, through and industrial users in this area.

For the KY 61 scoping project, several goals and objectives were identified, and are summarized as follows:

- Improve safety along the route
- Provide an improved facility for truck traffic
- Improve the geometric qualities of the roadway

AGENDA
Intermediate Planning Study – Initial Meeting

1) Introduction and Purpose

2) Project Goals and Objectives
   a) Identify general project area
   b) Discuss available data and reports
   c) Discuss problems with existing roadway or network
   d) Discuss benefits of proposed project
   e) Identify additional information needed to document problems
      i) Traffic data
      ii) Accident data
      iii) Existing roadway geometry
      iv) Other
   f) Identify logical termini
   g) Develop project goals and objectives (preliminary purpose and need)

3) Discuss Possible Alternatives and Corridors

4) Define Environmental Footprint Area

5) Discuss Probable Design Criteria
   a) Functional class
   b) ADT/DHV
   c) Design speed
   d) Typical section
   e) Other criteria

6) Discuss Agency Coordination Needs
   a) General agency coordination
   b) Other local or interested agencies or groups

7) Discuss Public Involvement Needs
   a) Discuss need for and number of public information meetings
   b) Discuss information to provide at meetings
   c) Discuss meeting logistics (location, date, time, coordination)

8) Discuss Documentation/Reports
   a) Previously developed information
   b) Information to include in report
   c) Level of detail in corridor/alternate development
   d) Other

9) Field Review of Project Area (as needed)

APPENDIX E.
LOCAL OFFICIALS AND ORGANIZATIONS MEETING MINUTES

Green-Adair Counties (Item No. 4-128.00)
Reconstruction of KY 61
Local Officials Meeting Minutes
11/02/00

This meeting with local officials in Columbia, KY, at 9:30 a.m. CST in the Adair County Courthouse, was organized as part of the ongoing Scoping Study process for the Green-Adair County Reconstruction of KY 61 (Item No. 4-128.00). The purpose of this meeting was to introduce the project, discuss potential project issues, and solicit input from the local area officials. Those in attendance include:

Name	Affiliation
Mary Ann Blaydes Baron	Judge Executive
Eddie Bailey	Green County Businessman
David Milby	Green County Farmer
Bill Edwards	Mayor City of Greensburg
Curtis Hardwick	Mayor City of Columbia
Bill Taylor	Councilmen City of Greensburg
James Comer	KY State Representative-Elect
Neal Cundiff	Lake Cumberland Area Development District
Ron Tarter	Lake Cumberland Area Development District
Paul Estes	KYTC D-4
Morgan Miller	KYTC Assistant to Mike Hancock
Cathi Blair	KYTC D-8 Environmental
Ted Noe	KYTC Division of Planning
Jim Wilson	KYTC Planning Frankfort
David Beattie	KYTC D-8 Planning
Patty Dunaway	KYTC D-4 Planning
Marc Williams	WSA, Lexington
Bill Leake	WSA, Lexington

Project Purpose and Existing Information
The judge identified serious problems with proposed alignments identified for the Greensburg Bypass. This project is not directly related to the KY 61 Scoping Study.

Jim Wilson asked about preferences for reconstruction: whether it should be existing alignment or a new alignment? It was noted that a new alignment is good because it will provide a cheaper/straighter alignment. However, the county would be concerned with the burden (cost) associated with having to maintain the old road.

The Green County Judge said that they are one of only five or seven counties in the state without AAA/National Truck Network access.

Project Issues and Goals
David Beattie stated that getting the project onto the National Truck Network is important for a project goal. This is a different designation from AAA and is probably what's intended.

How is public support/opposition?
Green Countians understand the importance of the project for economic development opportunities.

Public Meeting
- Meeting can be held in the courthouse.
- Meeting time should be set later in the evening because a lot of people work out of town.
- Meeting announcements posted in the stores, on radio, and in local newspapers.
- Judge could make announcements on the radio.

Additional Comments
Judge noted that this project has been planned for and talked about for many years and the public should support it.

Mayor noted that he was not aware of any minority/disadvantaged neighborhoods or related issues along the corridor.

Green-Adair Counties (Item No. 4-128.00)
Reconstruction of KY 61
Local Agencies Meeting Minutes
11/02/00

This meeting with local agencies in Columbia, KY, at 11:00 a.m. CST in the Adair County Courthouse, was organized as part of the ongoing Scoping Study process for the Green-Adair County Reconstruction of KY 61 (Item No. 4-128.00). The purpose of this meeting was to introduce the project, discuss potential project issues, and solicit input from the local area interest groups. Those in attendance include:

Name	Affiliation
Mary Ann Blaydes Baron	Judge Executive
Randal Murrell	Greensburg Postmaster
Gerry Dennison	Columbia Postmaster
Sam Moore	Renaissance Kentucky Program
Neal Cundiff	Lake Cumberland Area Development District
Joe DeSpain	Green County Chamber
Eddie Bailey	Businessman/Property Owner
David Milby	Businessman/Property Owner
Paul Estes	KYTC D-4
Morgan Miller	KYTC
Cathi Blair	KYTC D-8 Environmental
Ted Noe	KYTC Division of Planning
Jim Wilson	KYTC Planning Frankfort
David Beattie	KYTC D-8 Planning
Patty Dunaway	KYTC D-4 Planning
Marc Williams	WSA, Lexington
Bill Leake	WSA, Lexington

Jim Wilson reviewed the purpose of the meeting and the current schedule and funding for the KY 61 project.

- Establish termini
- Type of improvement
- Environmental issues
- Public input

Project Issues

- Improve safety
- Improve geometric quality
- Truck traffic

Jim Wilson asked if the goals identified adequately represent the intent of the project. Attendees agreed that they did.

Sam Moore talked about the historical integrity of the roadway and designing the road in a context-sensitive manner as being an important issue. Greensburg is participating in the Governor's Renaissance Program.

How far off the existing road are historical properties identified? (Depends upon historical context).

The Jane Todd Crawford Trail represents a historical issue that will need to be considered.

Types of design considerations being considered

- This is a planning study that is looking at a corridor
- Design characteristics will likely involve two 12 foot lanes and 12 foot shoulders
- This will be a relocation of existing KY 61 (as identified in the 6-Year Plan).

Judge Blaydes Barron noted that bicycle facilities should be integrated in the design consideration for this roadway due to tourism and historical characteristics of the corridor.

Joe DeSpain and Sam Moore asked if they could obtain a printed copy of the historical information of the corridor so they may review it and provide comments and additional input.

Accidents along KY 61 from MP 6-7 are largely due to a tangent section of roadway where people drag race.

The road is not wide enough for trucks. Two trucks can't safely pass and many run illegally. School buses may not even be legal, if they are 102 inches wide.

It was emphasized that the locals were frustrated that the road had been delayed for so long. The Judge noted that the KY 61 project has been in and out of the 6-Year Plan since 1969.

David Beattie mentioned that the Columbia Bypass is in Final Design and ROW acquisition is scheduled for 2003.

Bill Leake talked about the format and purpose of the public meeting

- Gain input on issues
- Preferences for potential relocation alignments
- Identify any locally known environmental issues not shown on mapping exhibits
- Identify support of the project from local communities and users

APPENDIX F.
EARLY PUBLIC INFORMATION MEETING SUMMARY

Public Information Meeting Minutes
Adair and Green Counties Reconstruction of KY 61
Item No. 4-128.00
Adair County High School 5:00 to 6:45 p.m.
December 7, 2000

A public information meeting was held on Thursday, December 7, 2000 from 5:00 to 6:45 p.m. in the Adair County High School Cafeteria, Columbia, KY.

The following KYTC Planning, District 8 and consultant staff representatives were in attendance:

Cathi Blair	District 8 Environmental Coordinator
David Beattie	District 8 Planning Engineer
Greg Eastman	District 8 Design Engineer
David Smith	District 8 Right of Way Agent
Jeffrey Womack	District 8 Title VI Coordinator
Charles Hale	District 8 Right of Way Agent
Neal Cundiff	Lake Cumberland ADD
Jim Wilson	KYTC Division of Planning
Ted Noe	KYTC Division of Planning
Brad Johnson	Wilbur Smith Associates
Bill Leake, P.E., P.L.S.	Wilbur Smith Associates

The public meeting opened at 5:00 p.m. with sign-in sheets (see attached list) and handouts available for all attendees. A total of forty-five (45) persons attended the public session (this number does not include the above eleven persons) and provided constructive comments regarding the bypass project. Ted Noe, of the KYTC Division of Planning, began the public meeting process by providing a powerpoint presentation of the project information, including the overall project development process, a typical timeline for a project, the current status of this project, and project goals, purpose and issues for the project.

After the presentation, the open-house portion of the meeting began. The meeting room was set up with four information/discussion stations. Each location included aerial photography and environmental footprint exhibits with the proposed corridor location identified for the public to view and provide comments. At each of the information stations, KYTC and consultant staff were available to address issues and comments from the public. Flip chart boards were also provided at each location and comments from the public were recorded on the boards. This information will be made a part of the final report document.

The Division of Planning also provided refreshments for those in attendance, which went over well with those in attendance and provided for a friendlier atmosphere.

Concerns of those in attendance were as follows:

- KY 61 is in need of no additional improvements;
- Improve KY 61 and Doe Run and KY 61 and Udell-Shirley Road intersections because of sight distance problems;
- Improve drainage at KY 61 and Caney Fork Road;
- Need to provide a new connection between KY 61 north of Columbia and KY 61 south of Columbia eliminating the need to travel through Columbia;
- Improvement to KY 61 segment just north of Adair/Green County Line needed;
- KY 61 needs only spot improvements along existing route;
- Given the importance of roadway safety, improvements are needed to reduce or eliminate hazards along route;
- Improvements to KY 61 are needed for to promote commerce and industry;
- Relocation of roadway would affect store owners along existing route;
- Need sight distance improvements along KY 61;
- Because of the narrow lane width along KY 61, several truck have had side view mirror impacts; and,
- Clover Lick Creek bridge is too narrow.

The general opinion of most who attended appeared to indicate a support for some level of improvement to KY 61; however, there were mixed opinions as to the level of improvement needed. Additional comments are expected from the survey forms distributed at the meeting.

The meeting closed at 7:45 p.m.

Public Information Meeting Minutes
Adair and Green Counties, Reconstruction of KY 61
Item No. 4-128.00
Green County Middle School, 5:30 to 7:30 p.m.
December 14, 2000

A public information meeting regarding the reconstruction of KY 61 was held on Thursday, December 14, 2000 from 5:30 to 7:30 p.m. in the Green County Middle School cafeteria in Greensburg, Kentucky.

The following KYTC Planning, District 4 office and consultant staff were in attendance:

Patty Dunaway	KYTC District 4
Neal Cundiff	Lake Cumberland Area Development District
Carl Dixon	KYTC Division of Planning
Ted Noe	KYTC Division of Planning
Bill Leake	Wilbur Smith Associates
Lance Morris	Wilbur Smith Associates

The public meeting opened at 5:30 p.m. with sign-in sheets (see attached list) and handouts available for all attendees. Ted Noe, of the KYTC Division of Planning, began the public meeting process by providing a PowerPoint presentation of the project information, including the overall project development process, a typical timeline for a project, the current status of this project, and project goals, purpose and issues for the project.

Following Ted's presentation, the open-house portion of the meeting began. The meeting room was set up with four information/discussion stations. Each location included aerial photography and environmental footprint exhibits with the proposed study area identified for the public to view and provide comments. At each of the information stations, KYTC and consultant staff were available to address issues and comments from the public. Flip chart boards were also provided at each location and comments from the public were recorded on the boards. This information will be made a part of the final report document.

The Division of Planning also provided refreshments for those in attendance, providing for a more relaxed atmosphere.

A total of sixty-five (65) persons attended the two hour public session (this number does not include the above six persons) and provided constructive comments regarding the reconstruction project. The general opinion of those in attendance indicated that the community needs the KY 61 reconstruction to allow for local access to a major trucking route. There were no opinions as to the location.

Concerns, comments and questions of those in attendance included the following:

<u>Environmental Issues</u>:

- There is a cave with a potential brown bat community located about 2 miles south of Greensburg on west side of KY 61;

- Another cave is located along KY 565 about 0.5 miles south of the KY 61/KY 565 intersection; and,
- There is frequently a flooding problem at the junction of Caney Creek and KY 61.

Cultural Issues:

- Many heavy trucks exceed the speed limit on the south side of the rock quarry;
- There is a need for increased signage for flooding and dangerous curve problems along KY 61;
- A number of visibility problems exist along the corridor, including the Caney Fork bridge, the KY 61 and Temperance Road intersection (just north of the KY 565 intersection), and the KY 61 and Russell Creek Road intersection;
- The Caney Fork bridge needs improvement; and,
- Consideration should be given to the cemetery located at the junction of US 68 and KY 61.

The meeting closed at approximately 7:30 p.m.

APPENDIX G.
RESOURCE AGENCY COORDINATION RESPONSES

Ted

Commonwealth of Kentucky
Transportation Cabinet
Frankfort, Kentucky 40622

James C. Codell, III
Secretary of Transportation

E. Jeffrey Mosley
Deputy Secretary

Paul E. Patton
Governor

December 22, 2000

KY 61 Agency Mailing List
(See attached list)

Dear:

The Kentucky Transportation Cabinet is requesting your agency's input and comments on the needs and potential impacts of a proposed highway project.

We believe that early identification of issues or concerns can help us select highway project alternatives that avoid or minimize impacts before the project begins final design. The Intermodal Surface Transportation Efficiency Act (ISTEA) and Transportation Efficiency Act for the 21st Century (TEA-21) encourage early coordination between government agencies in order to streamline environmental reviews during the project development process. The Federal Highway Administration is partnering with us in these efforts. With this cooperation in mind, we are asking for you to notify us of specific issues or concerns of your agency that could affect future phases of the project described below.

The Kentucky Transportation Cabinet has assembled a study team to evaluate the effectiveness and environmental consequences resulting from the reconstruction of KY 61 from Greensburg to Columbia. The study is currently in the initial data-gathering stage. This project is scheduled in the Kentucky Transportation Cabinet's Recommended Six Year Highway Plan for a design start in FY2002. This request is intended to aid the design phase by addressing public and agency concerns earlier in the project development process.

We have enclosed the following project information for your review and comment:

- Study Purpose, Issues, and Project Goals
- Location Map Showing Year 2000 Traffic and Level of Service
- Accident Information from 1996 to 1999
- U.S.G.S Topographic Map Showing Known Environmental Issues

Please note that this letter does not serve as a notice of intent to prepare an environmental document in accordance with the National Environmental Policy Act (NEPA). However, we hope to identify issues now that could affect and streamline future phases of the project. We understand that you may not be able to provide extensive detail at this time within the time requested, but we would like to receive enough information to identify the general nature and relative magnitude of each issue or concern. More detailed information will be gathered in the next phase of project implementation when we begin the NEPA process.

Specifically, we wish to know how this project affects your organization and/or its area of interest. We also would like to know if your organization is aware of any issues or problems within the project area. Any input and/or insight you can provide concerning this proposed improvement would be welcomed. We respectfully ask that you provide us with your project comments by January 19, 2001, to ensure timely progress in this planning effort.

We are also emphasizing the issue of environmental justice. The purpose of this emphasis is to ensure equitable environmental protection regardless of race, ethnicity, age, disability, economic status or community, so that no segment of the population bears a disproportionate share of the consequences of environmental impacts attributable to a proposed project. Please let us know if you are aware of any of these groups or individuals in the project area that could possibly be impacted either positively or negatively.

We appreciate any input you can provide concerning this project. Please direct any comments, questions, or requests for additional information to Ted Noe of the Division of Planning at 502/564-7183 or at tnoe@mail.kytc.state.ky.us. Please address all written correspondence to Annette Coffey, P.E., Director, Division of Planning, Kentucky Transportation Cabinet, 125 Holmes Street, Frankfort, Kentucky 40622.

Sincerely,

Annette Coffey

Annette Coffey, P.E.
Director
Division of Planning

AC:TN:NH

Enclosures

c/att: Jose Sepulveda
Stuart Carman
Neil Cundiff
Sherrill Smith
Roger Coffey
Patty Dunaway
David Beattie

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AAA Kentucky
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Independent Hauler Association
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Scenic Kentucky
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Kentucky Association of Riverports
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Natural Resources and
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Mr. Hugh Archer, Commissioner
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Natural Resources and
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Kentucky Heritage Council
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Tompkinsville, Kentucky 42167

The Honorable Ricky Lee Cox
State Representative - 51st District
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The Honorable Richie Sanders, Jr.
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United States Senator
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The Honorable Mitch McConnell
United States Senator
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Greensburg, Kentucky 42743

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County Fire Coordinator
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Reverend Joe Payne
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Columbia, Kentucky 42728

Rogers Trucking Company
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Columbia, Kentucky 42728

IMO Pump Industries
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Columbia, Kentucky 42728

Postmaster
Columbia Post Office
800 Burkesville Street
Columbia, Kentucky 42728

STUDY PURPOSE, ISSUES, AND PROJECT GOALS

Scoping Study
KY 61 Scoping Study from Columbia to Greensburg
Adair and Green Counties, Kentucky
(Item No. 4-128.00)

Study Purpose

The purpose of this Scoping Study is to define and gather critical information on the project prior to the design phase. Priority section design is currently scheduled to begin in Fiscal Year 2002 (i.e., July 1, 2001 – June 30, 2002). This study is intended to help define the location and purpose of the project and better meet Federal requirements regarding consideration of environmental issues as defined in the National Environmental Policy Act (NEPA). Items involved with this study include:

- Define project goals;
- Identify the beginning and ending points of the project as well as potential project locations and design concepts;
- Discuss project needs and issues with public officials, government agencies and other groups with a special interest in the project;
- Identify known environmental concerns; and,
- Listen to and share information with the public.

Issues

Problems identified along the existing KY 61 corridor mainly involve safety issues such as difficult intersections at both ends of the corridor; vertical and horizontal curves along portions of the route; and accident frequency. There are also a number of truck access and weight limit issues along the corridor. It is currently classified as a "AA" 62,000 lbs gross vehicle weight highway.

Other corridors in the project area include KY 55 and KY 61/US 68 north of Greensburg, both of which have recently been improved.

Project Goals

For the KY 61 project, several goals and objectives have been identified, including:

- Improve safety along the route;
- Improve the geometric qualities of the roadway;
- Provide an improved facility for truck traffic; and,
- Provide a National Truck Network or a "AAA" 80,000 lbs gross vehicle weight highway facility to improve accessibility in the study area.

Project Schedule

The current schedule for the project is:

Phase	Year	Funding
Planning	FY 2001	$0.25 million
Design	FY 2002	$0.75 million
Right-of-Way Acquisition	Not Scheduled	--
Utility Relocation	Not Scheduled	--
Construction	Not Scheduled	--

Design for the priority section of this project, scheduled for FY 2002, is approved and funded by the legislature.

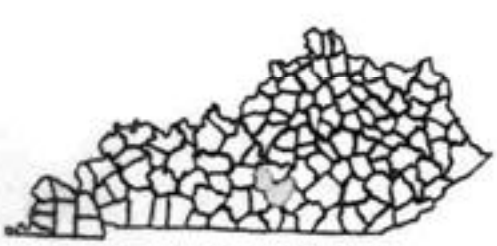
Contacts

Address written comments to:

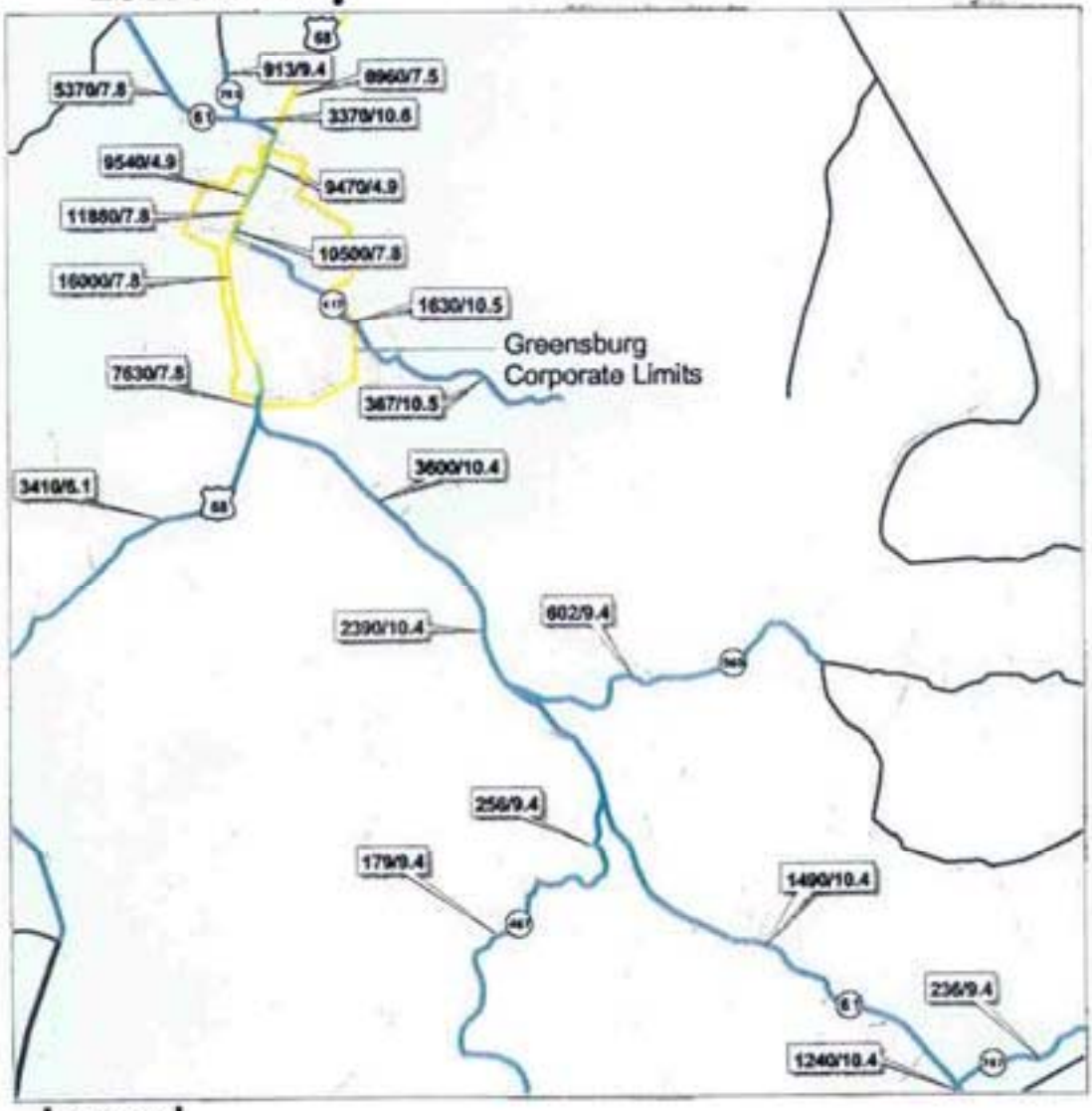
Annette Coffey, P.E.
Director
Kentucky Transportation Cabinet
Division of Planning
125 Holmes Street
Frankfort, KY 40622

Or you may contact by phone:

Carl Dixon
(502) 564-7183



Location Map



Legend

1365/7.5	ADT/ % Truck Traffic
	C or Better
	D
	E
	F

8000 0 8000 Feet

EDUCATION PAYS

WSA Wilbur Smith Associates Engineers - Planners

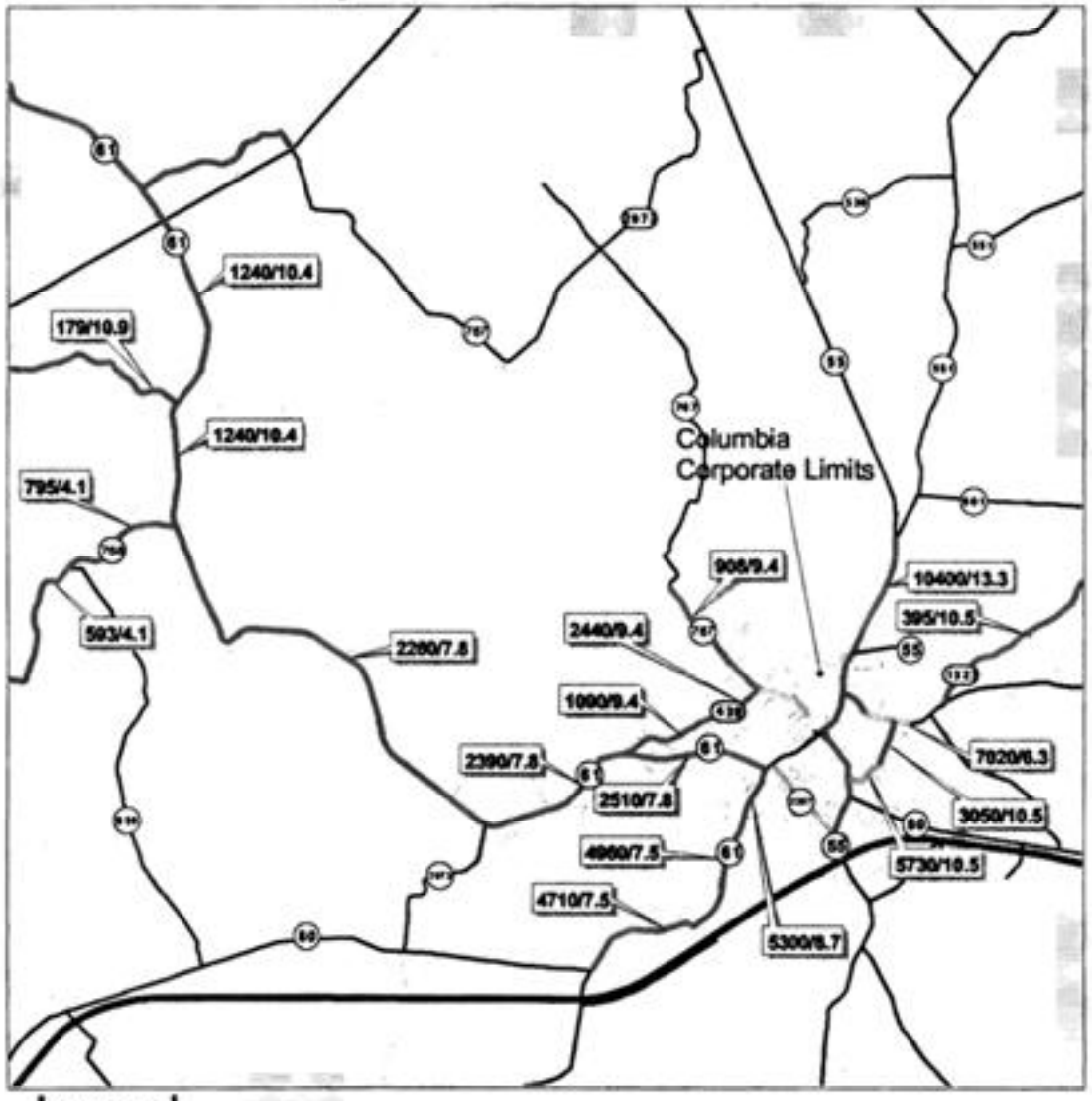
Year 2000 Traffic and Level of Service

KY 61 Northern Corridor

Adair-Green Counties
Item No. 4-128.00

Printed: 10/31/2000

Location Map



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1365/7.5	ADT/ % Truck Traffic
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EDUCATION PAYS

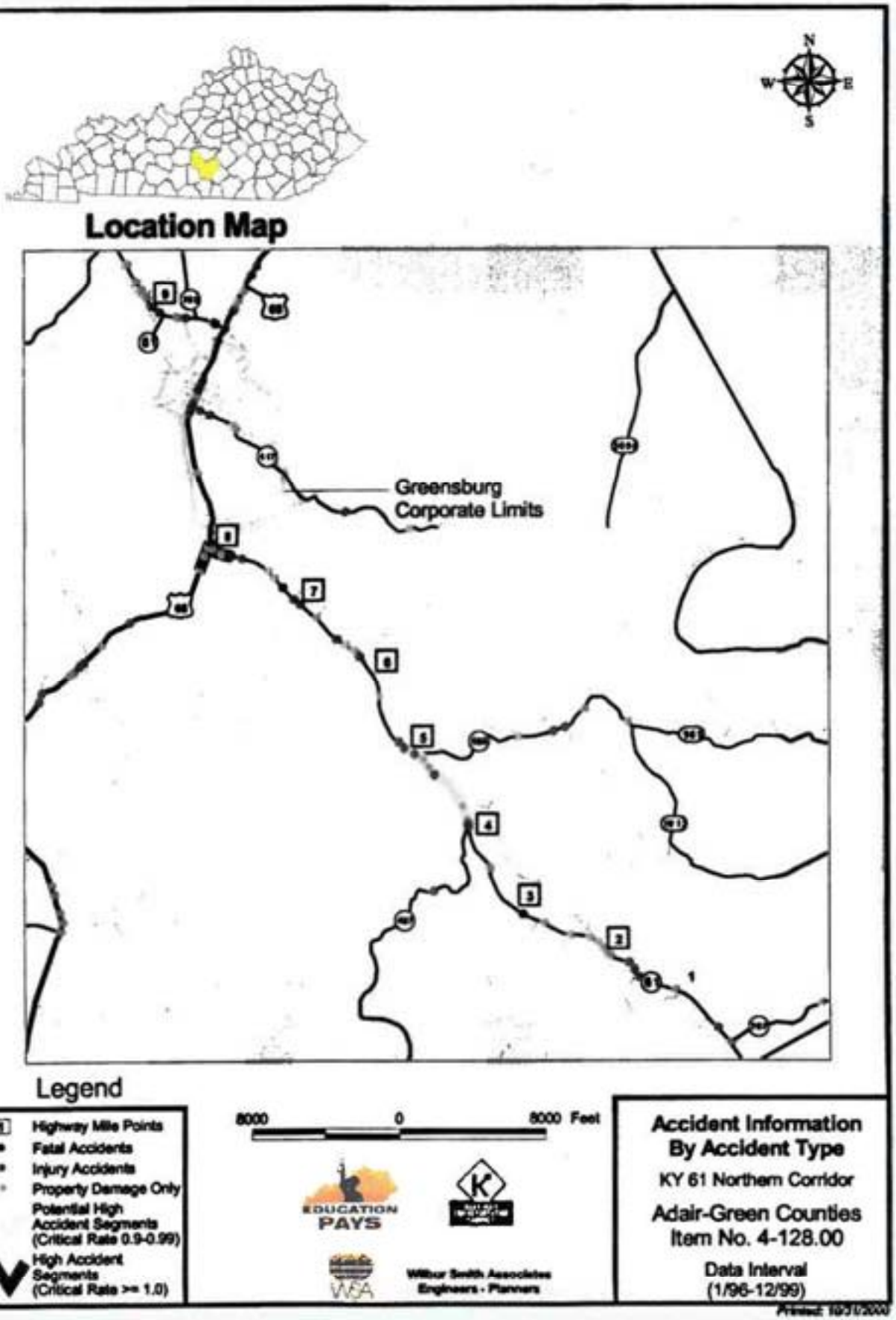
Wilbur Smith Associates
Engineers - Planners

Year 2000
Traffic and Level of Service

KY 61 Southern Corridor

Adair-Green Counties
Item No. 4-128.00

Printed: 10/31/2000


N
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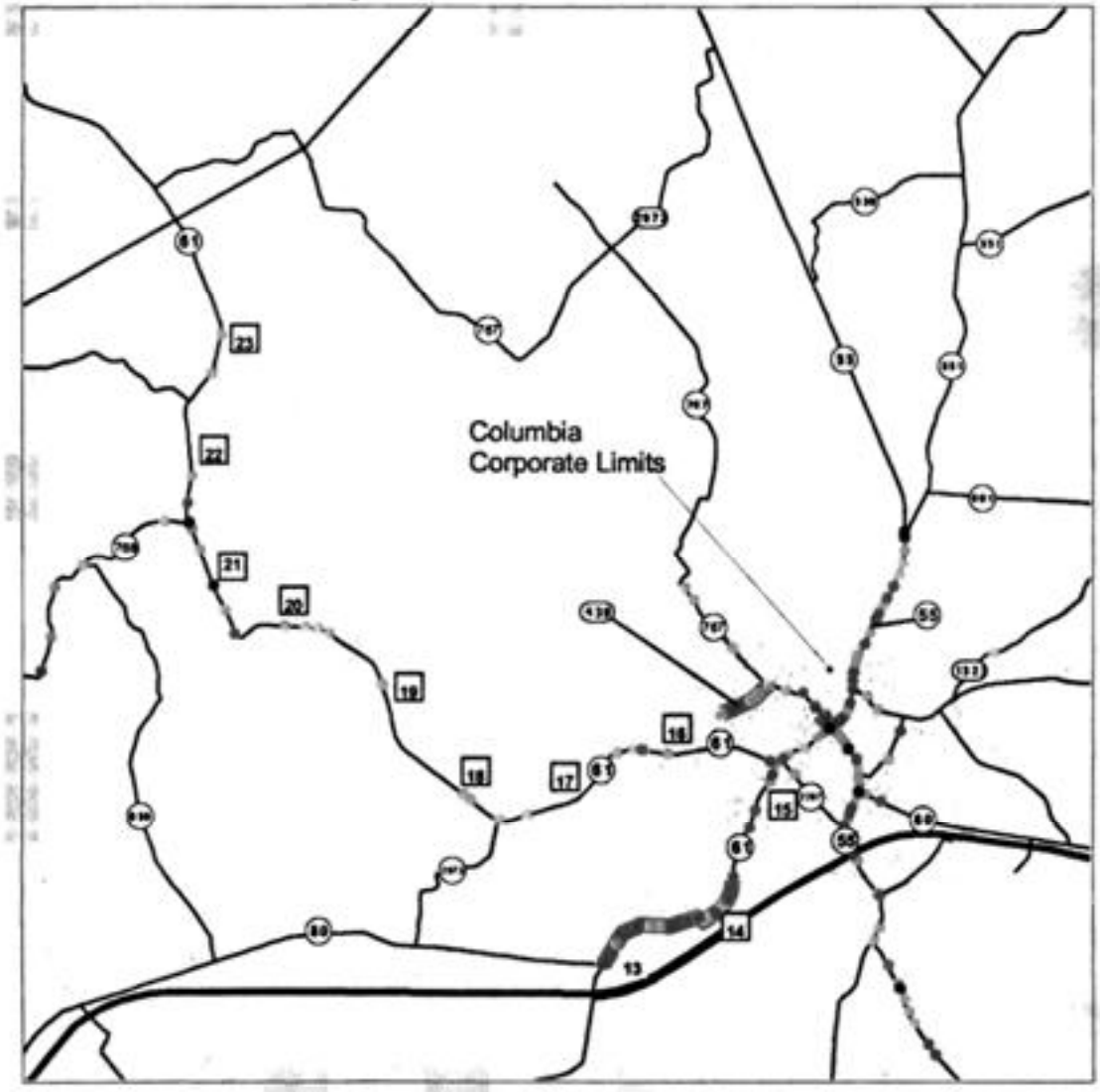
Location Map
Greensburg
Corporate Limits
8
7
6
5
4
3
2
1
Legend
Highway Mile Points
Fatal Accidents
Injury Accidents
Property Damage Only
Potential High Accident Segments (Critical Rate 0.9-0.99)
High Accident Segments (Critical Rate >= 1.0)
8000
0
8000 Feet
EDUCATION PAYS
Wilbur Smith Associates
Engineers - Planners
Accident Information
By Accident Type
KY 61 Northern Corridor
Adair-Green Counties
Item No. 4-128.00
Data Interval
(1/96-12/99)

Location Map



Legend

- Highway Mile Points
- Fatal Accidents
- Injury Accidents
- Property Damage Only
- Potential High Accident Segments (Critical Rate 0.9-0.99)
- High Accident Segments (Critical Rate >= 1.0)

8000 0 8000 Feet

EDUCATION PAYS

Wilbur Smith Associates
Engineers - Planners

Accident Information By Accident Type

KY 61 Southern Corridor

Adair-Green Counties
Item No. 4-128.00

Data Interval
(1/96-12/99)

Printed: 10/31/2000

- Historical Structures
- Power Plants
- Ports
- Locks
- Dams
- NRC Nuclear Facilities
- National Register Listed Property
- Paging Towers
- Cellular Towers
- Antenna Structures
- Archaeological Sites
- Underground Storage Tanks
- Airport
- Landfills
- EPA Site [TRIS]
- EPA Site [RCRIS]
- EPA Pollutant Discharge Site
- EPA Site [FINDS]
- EPA Site [ERNS]
- Superfund Site
- EPA Site [AIRS]
- Intermodal Terminals
- Amtrak Stations
- Abandoned Mine Lands
- Stratigraphic (Core) Test
- Tire Dump
- Sewage Treatment Plants
- Parks
- Public Water Source
- Coal Exploration Sites
- Waterwells
- Water Gages
- Cemetery
- Church
- School
- Oil well
- Combined Oil and Gas Wells
- Gas Well
- Dry and Abandoned Well
- Secondary Recovery Injection Well
- Well Location
- Miscellaneous Well
- Project Corridor
- Parkways
- Railroads
- Faults
- Streams
- National Wetlands Inventory
- Wild Rivers
- Wildlife Management Areas
- U.S. Forest Service
- National Park Service_Units
- Military
- State Parks
- State Forests
- Lake

4000 0 4000 Feet

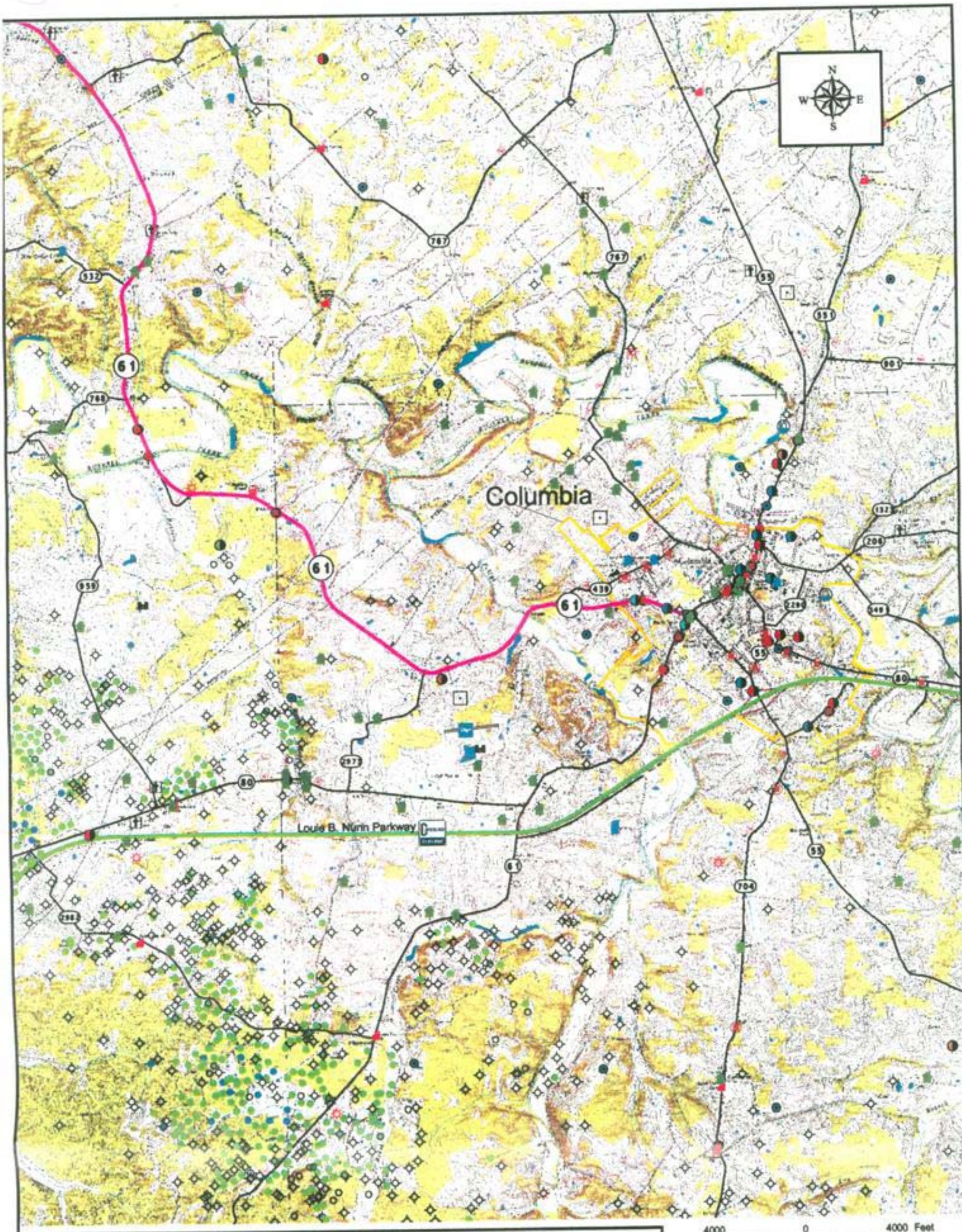
EDUCATION PAYS

Wilbur Smith Associates
Engineers · Planners

U.S.G.S.Topographic Quad
Environmental Footprint
KY 61 Northern Corridor

Adair-Green Counties
Item No. 4-128.00

Printed: 11/08/2000


N
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Columbia
Louie B. Nunn Parkway
61
80
55
68
4000
0
4000 Feet
Historical Structures
Power Plants
Ports
Locks
Dams
NRC Nuclear Facilities
National Register Listed Property
Paging Towers
Cellular Towers
Antenna Structures
Archaeological Sites
Underground Storage Tanks
Airport
Landfills
EPA Site [TRIS]
EPA Site [RCRIS]
EPA Pollutant Discharge Site
EPA Site [FINDS]
EPA Site [ERNS]
Superfund Site
EPA Site [AIRS]
Intermodal Terminals
Amtrak Stations
Abandoned Mine Lands
Stratigraphic (Core) Test
Tire Dump
Sewage Treatment Plants
Parks
Public Water Source
Coal Exploration Sites
Waterwells
Water Gages
Cemetery
Church
School
Oil well
Combined Oil and Gas Wells
Gas Well
Dry and Abandoned Well
Secondary Recovery Injection Well
Well Location
Miscellaneous Well
Project Corridor
Parkways
Railroads
Faults
Streams
National Wetlands Inventory
Wild Rivers
Wildlife Management Areas
U.S. Forest Service
National Park Service_Units
Military
State Parks
State Forests
Lake
EDUCATION PAYS
Wilbur Smith Associates
Engineers • Planners
U.S.G.S.Topographic Quad
Environmental Footprint
KY 61 Southern Corridor
Adair-Green Counties
Item No. 4-128.00
Printed: 11/08/2000

APPALACHIAN REGIONAL COMMISSION
A Proud Past, A New Vision

January 16, 2001

Ms. Annette Coffey, P.E.
Director
Division of Planning
Kentucky Transportation Cabinet
125 Holmes Street
Frankfort, KY 40622

Dear Ms. Coffey:

Thank you for your December 22, 2000 letter offering the Appalachian Regional Commission (ARC) an opportunity to comment on the reconstruction of SR 61 from Greensburg to Columbia in Green and Adair Counties.

The proposed project will not have any adverse effect on the Appalachian Development Highway System.

Should you have any questions please do not hesitate to contact me at (202) 884 7706.

Sincerely:

Edward A. Terry, Jr.
Senior Transportation Advisor

Cc: Mr. Jose M. Sepulveda - FHWA

1666 CONNECTICUT AVENUE, NW, SUITE 700 WASHINGTON, DC 20009-1068 (202) 884-7799 FAX (202) 884-7691

City of Columbia

Municipal Building
116 Campbellsville Street

Phone 270-384-2501
Columbia, KY 42728

January 17, 2001

Annette Coffey, P. E.
Director, Division of Planning
Kentucky Transportation Cabinet
125 Holmes Street
Frankfort, KY 40622

Re: KY 61 Scoping Study from Greensburg to Columbia

Ms. Coffey:

The proposed project is needed for our area and should have a positive impact on industrial development. Safety is a concern and the project would help with that problem. We are sure the environmental issues will be addressed in an appropriate manner. We do not know of any group of people that would be adversely impacted.

We look forward to the project proceeding.

Sincerely,

Curtis Hardwick

Curtis Hardwick
Mayor

PAUL E. PATTON
GOVERNOR

CABINET FOR WORKFORCE DEVELOPMENT
OFFICE OF THE SECRETARY
CAPITAL PLAZA TOWER, 2nd FLOOR
500 MERO STREET
FRANKFORT, KENTUCKY 40601
PHONE (502) 564-6606 FAX (502) 564-7967

ALLEN D. ROSE
SECRETARY

January 17, 2001

Annette Coffey, P.E.
Director
Division of Planning
Kentucky Transportation Cabinet
125 Holmes Street
Frankfort, Kentucky 40601

Dear Ms. Coffey:

The Cabinet for Workforce Development appreciates the opportunity to comment on the following projects:

- reconstruction of KY 90 from the Cumberland Parkway to the Melcalfe County line
- proposed construction of a connector from KY 55 to US 68 in Marion County
- improvements to KY 737 from north of Leitchfield to the junction of KY 259
- reconstruction of KY 61 from Greensburg to Columbia
- reconstruction of US 460 from KY 599 in Jeffersonville to KY 713 in Montgomergy and Menifee Counties

At this time, the proposed projects do not affect the Cabinet and its agencies.

Again, thank you for the opportunity to comment.

Sincerely,

Allen D. Rose
Secretary

ADR/SGS

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF FISH AND WILDLIFE RESOURCES
C. THOMAS BENNETT, COMMISSIONER

January 11, 2001

Annette Coffey, P.E.
Director, Division of Planning
Kentucky Transportation Cabinet
125 Holmes Street
Frankfort, KY 40601

Re: Threatened/Endangered species review; Intermediate Planning Study, Reconstruction of KY 61 from Greensburg to Colunbia, Green and Adair Counties, Kentucky

Dear Ms. Coffey:

The Kentucky Department of Fish and Wildlife Resources (KDFWR) has received your request for the above-referenced information. The Kentucky Fish and Wildlife Information System indicates that no federally threatened or endangered fish and wildlife are known to occur in the Columbia, Gradyville, Greensburg, and Gresham 7.5 minute USGS quadrangles. Therefore, KDFWR does not anticipate any significant impacts. Please be aware that our database system is a dynamic one that only represents our current knowledge of the various species distributions.

KDFWR has determined that potential negative impacts to the aquatic resources can occur in the project area and offers the following recommendations:

1) crossing should be designed and constructed to accommodate high flow conditions;
2) development in or near streams only during low flow periods to minimize disturbances;
3) culverts should be placed even with substrate to allow aquatic organisms to move freely within stream channel;
4) proper placement of erosion control structures below disturbed areas to minimize entry of silt to stream;
5) replanting of disturbed areas after construction, including stream banks and right-of-ways, with native vegetation for soil stabilization and enhancement of fish and wildlife populations;
6) return of disturbed instream habitat to its original condition upon completion of construction in the area;
7) avoidance of tree canopy overhanging streams; and
8) return all right-of-ways to original elevation.

I hope this information will be helpful to you. Should you require additional information, please contact me at (502) 564-7109, ext. 367.

Sincerely,

Marla T. Barbour
Fisheries Biologist III

cc: Environmental Section File
Alex Barber

JAMES E. BICKFORD
SECRETARY

PAUL E. PATTON
GOVERNOR

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
FRANKFORT OFFICE PARK
14 REILLY RD
FRANKFORT KY 40601

February 21, 2001

Annette Coffey, P. E.
Director, Division of Planning
Kentucky Transportation Cabinet
125 Holmes Street
Frankfort, Kentucky 40622

Re: Three KTC Projects: 1. Improvements to KY 737 from north of Leitchfield to the junction of KY 259 in Grayson and Breckinridge; 2: Reconstruction of KY 61 from Greensburg in Green County to Columbia in Adair County KY; 3: Construction of a northwestern connector from Corporate Drive (KY 2154) at KY 55 to US 68 west of Lebanon in Marion County. (SERO 2000-97)

Dear Ms. Coffey:

The Natural Resources and Environmental Protection Cabinet (NREPC) serves as the state clearinghouse for review of environmental documents generated pursuant to the National Environmental Policy Act (NEPA). Within the Cabinet, the Commissioner's Office in the Department for Environmental Protection **coordinates** the review for Kentucky State Agencies.

The Kentucky agencies listed on the attached sheet have been provided an opportunity to review the above referenced report. Responses were received from 10 (also marked on attached sheet) of the agencies that were forwarded a copy of the document. Attached are comments from the Kentucky Divisions of Water, Waste Management, Air Quality, and the Kentucky Nature Preserves Commission. Also, there is a copy of a previous response from the Kentucky Department of Fish and Wildlife Resources and the Kentucky Division of Conservation that was sent directly to you.

If you should have any questions, please contact me at (502) 564-2150, ext. 112.

Sincerely,

Alex Barber
State Environmental Review Officer

Enclosure

NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
ENVIRONMENTAL REVIEW

Three KTC Projects: 1. Improvements to KY 737 from north of Leitchfield to the junction of KY 259 in Grayson and Breckinridge; 2: Reconstruction of KY 61 from Greensburg in Green County to Columbia in Adair County KY; 3: Construction of a northwestern connector from Corporate Drive (KY 2154) at KY 55 to US 68 west of Lebanon in Marion County.

The following agencies were asked to review the above referenced project. Each agency that returned a response will appear below with their comments and the date the project response was returned.

C-- denotes Comments
NC-- denotes No Comment
IR-- denotes Information Request
NR-- denotes No Response
NS-- denotes Not Sent
DIR-- denotes Comments Sent Directly to Sponsor

REVIEWING AGENCIES:

Division of Water _____ comments

Division of Waste Management _____ comments

Division for Air Quality (Air Pol Cont Dist of Jeff Co) _____ comments

Department of Health Services _____

Economic Development Cabinet _____

Division of Forestry _____ nc

Department of Surface Mining Reclamation & Enforcement _____ nc

Department of Parks _____ nc

Department of Agriculture _____

Nature Preserves Commission _____ comments

Kentucky Heritage Council _____

Division of Conservation _____ comments-dir

Department for Natural Resources _____

Department of Fish & Wildlife Resources _____ comments-dir

Transportation Cabinet _____

Department for Military Affairs _____ nc

MEMORANDUM

TO: Don Whitley
Right of Way Supervisor
District No. 4 - Elizabethtown

FROM: Ralph Divine, Director
Division of Right of Way
And Utilities

DATE: January 4, 2001

SUBJECT: Adair/Green Counties; Item No. 4-128.00
KY 61 Southern Corridor
Route Study

The attached letter from Annette Coffey, P.E., Director of the Division of Planning, requests our input into the study of subject project. This is to request that you, and members of your staff, review the project and provide appropriate comments directly to the Division of Planning no later than January 19, 2001. Please provide this office a copy of your comments.

Your assistance with this study is appreciated.

Attachment

cc: Division of Planning
Division Branch Managers

JAMES E. BICKFORD
SECRETARY

PAUL E. PATTON
GOVERNOR

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
DIVISION FOR AIR QUALITY
803 SCHENKEL LN
FRANKFORT KY 40601-1403

January 25, 2001

Kentucky Transportation Cabinet
Attn: Annette Coffey, P.E.
125 Holmes Street
Frankfort, Ky. 40622

Project Number: **SERO 2000-97**

Dear Ms. Coffey:

This letter is in response to an informational packet received by this office December 30, 2000 concerning the **reconstruction Ky. 61 proposed for Green and Adair Counties**. As the project is presented there is no requirement for the issuance of an air quality permit, provided that construction and operation are conducted in compliance with the regulations below.

The primary concern that needs to be addressed in an Environmental Review should be the Fugitive Emissions generated by earthmoving and construction. Fugitive Emissions are regulated under **401 KAR 63:010**. This regulation sets forth the standards for particulate emission control as well as the rights of surrounding property owners who are given legal standing if the emissions cross the lot line of the originating property.

The Environmental Review will need to address the proper demolition and disposal of prior construction in accordance with the asbestos abatement regulations set forth in **401 KAR 58:025**. The disposal of materials through the use of fire must be conducted in accordance with open burning regulation **401 KAR 63:005**. Enclosed are fact sheets for open burning and asbestos as well as the Renovation/Demolition Notification Requirements to be utilized when dealing with existing construction.

If there are any questions relating to this matter you are encouraged to contact Allan Elliott, Permit Support Supervisor at (502) 573-3382 Ext. 455.

Thank you,

James L. Roe
Permit Support Section

JLR
Enclosures

EDUCATION PAYS

Kentucky Intergovernmental Review Process
Division for Air Quality – Asbestos Comments

The project to which this comment is attached involves construction, renovation, demolition, or some other activity, which might result in the discovery of asbestos-containing materials. The Kentucky Division for Air Quality conditionally approves the proposed project, contingent upon conformance with regulatory requirements for asbestos. The information listed below provides guidelines on Kentucky's asbestos regulations:

Asbestos includes the asbestiform varieties of serpentinite (chrysotile), riebeckite (crocidolite), cummingtonite-grunerite, anthophyllite, and actionolite-tremolite.

Demolition means the wrecking or taking out of any load-supporting structural member of a facility together with any related handling operations.

Renovation means altering in any way one or mare facility components. Operations in which load-supporting structural members are wrecked or taken out are excluded.

The coordinators of this project should be aware of the following facts and requirements:

- Breathing asbestos fibers can cause lung cancer and other respiratory diseases.
- Without proper precautions, renovations, demolitions, and even routine maintenance can release microscopic asbestos fibers into the air. Undisturbed asbestos materials, on the other hand, can be safely maintained if they are kept in good condition.
- Asbestos may be found in pipe and boiler insulation, flooring, roofing, wall and ceiling surfacing, ceiling tiles, exterior siding shingles, and even duct tape. More than 3,000 different products containing asbestos were used and are present in an estimated 733,000 public and commercial buildings and older residences nationwide.
- Before renovating or demolishing a structure, have it checked for asbestos by a qualified professional. Any asbestos that will be affected by the activity must be removed by a certified contractor before renovation or demolition begins.
- Written notification to the Division for Air Quality must precede asbestos removal and demolition of a structure in most cases. The purpose of these notifications is to allow Division inspectors an opportunity to check the site and assess the presence of asbestos.
- Removed asbestos wastes must be properly packaged, labeled and disposed at an approved landfill.
- The Division of Occupational Safety and Health Compliance, the Division of Waste Management, and the Transportation Cabinet also regulate handling, transportation, and disposal of asbestos. If a structure is owned by a federal or local agency, there may be additional procedural requirements for handling asbestos.
- The only outright exemptions from the Division's asbestos regulations are for homeowners who renovate or demolish their homes for residential purposes.

The requirements for asbestos may found in the following regulations:

401 KAR 57:011	Emission standards for asbestos
401 KAR 58:005	Accreditation of persons conducting asbestos work at schools
401 KAR 58:010	School management plan requirements; and
401 KAR 63:042	Requirements for asbestos abatement entities.

Questions may be directed to the Division for Air Quality, Special Programs Branch, at 502-573-3382.

Kentucky Intergovernmental Review Process
Division for Air Quality – Open Burning Comments

The project to which this comment is attached involves construction, renovation, demolition, or some other activity which might result in the accumulation of materials and/or debris which is subject to disposal. The Kentucky Division for Air Quality conditionally approves the proposed project, contingent upon conformance with open burning prohibitions. Open burning is generally prohibited and the information listed below provides guidelines on Kentucky's open burning regulations:

Open burning means the burning of any matter in such a manner that the products of combustion resulting from the burning are emitted directly into the outdoor atmosphere without passing through a stack or chimney.

Kentucky Division for Air Quality Regulation 401 KAR 63:005 states that no person shall open burn. Fires may be set for the following purposes, provided that they do not violate any of the provisions of KRS Chapter 149, 150, 227, or any other law of the Commonwealth of Kentucky, including local ordinances:

- Noncommercial food preparation for human consumption.
- Recreational or ceremonial purposes.
- Comfort heating, providing excessive or unusual smoke is not created.
- Weed abatement, disease, and pest prevention.
- Prevention of a fire hazard, including the disposal of dangerous materials where no safe alternative is available.
- Bona fide instruction and training of public and industrial employees in the methods of fighting fires.
- Recognized agricultural, silvicultural, range, and wildlife management practices.
- Burning of leaves by individual homeowners except in cities with populations greater than 8,000.
- Disposal of household paper products, originating at dwellings of five (5) family units or less, which fires are maintained by an occupant of the dwelling at the dwelling, except in cities with populations greater than 8,000.
- Disposing of accidental spills leaks of crude oil, petroleum products or other organic materials, and the disposal of absorbent material used in their removal, where no other economically feasible means of disposal is available and practical and provided permission is obtained from the Cabinet prior to burning.
- Disposal of natural growth for land clearing, and trees and tree limbs felled by storms, provided that no extraneous material such as tires or heavy oil which tend to produce dense smoke are used to cause ignition or aid combustion and the burning is done on sunny days with mild winds. With respect to particulate matter, the emissions from such fires shall not be equal to or greater than 40% opacity.

The Division of Forestry advises that precautions be taken when open burning materials which can be burned. Burn only between 4:30pm and midnight, if you are within 150 feet of the woods during spring and fall fire hazard season (March 1 – May 15 & October 1 – December 15). During other months of the year, the Division for Air Quality however, advises to burn legal materials on sunny days with mild winds, in order to have conditions for good dispersion of the pollutants.

The environmental concerns relating to air quality include the toxic emissions from the combustion of asphaltic shingles, painted or treated wood, insulation on wiring, and synthetic materials such as carpeting, carpet pads, and upholstery: lead from lead based painted materials; and asbestos emissions from pipe lagging, transite siding shingles, or asbestos contained in asphaltic roofing shingles. Applicable air quality regulations include:

401 KAR 63:005	Open burning;
401 KAR 63:020	Potentially hazardous matter or toxic substances;
401 KAR 63:022	New or modified sources emitting toxic air pollutants;
401 KAR 57:011	Asbestos standards (NESHAP); and
401 KAR 63:042	Requirements for asbestos abatement entities.

Questions may be directed to the Division for Air Quality, Field Operations Branch, at 502-573-3382.

JAMES E. BICKFORD
SECRETARY

PAUL E. PATTON
GOVERNOR

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
DIVISION FOR AIR QUALITY
803 SCHENKEL LN
FRANKFORT KY 40601-1403

rev.2/99

RENOVATION/DEMOLITION NOTIFICATION REQUIREMENTS*

Under 401 KAR 58:025, all facility demolitions and those planned facility renovations involving removal of at least 160 square, 260 linear, or 35 cubic feet of friable asbestos over a year's time require notification to the Division for Air Quality at least ten weekdays before starting the job. Exceptions are emergency renovations (i.e., removals necessitated by a sudden, unexpected event) and ordered demolitions of structurally unsound buildings that are in imminent danger of collapse, in which cases the notification must be submitted no later than the next weekday after work starts. To notify, use either DEP Form 7036 or the form shown in Figure 3 of 40 CFR 763, Subpart M.

Annual or blanket notifications are required for facilities with many small removals, each of which is below the threshold amounts given above, but added together, they exceed those amounts over a calendar year. These are removals that are necessitated by routine failures of equipment and can be expected to occur over the upcoming calendar year based on past operating experience but for which an exact schedule cannot be predicted. Submit this notification at least ten weekdays before January 1, and include an estimate of the collective amount of these sub-threshold removals. To receive documentation that these removal projects are in compliance, you should phone our inspector in your region at least one day before doing each removal so that an inspection can be arranged.

Notification is recommended but not required for renovations involving nonfriable removals. However, if the nonfriable materials will be crumbled, abraded, ground, sawed, etc., such that they will become friable, then the ten-day prior written notification is required.

Update the notification as necessary when changes occur that invalidate information provided on an earlier notification. Updates are required when the amount of asbestos changes by at least 20%. If the removal's start date is delayed, alert our inspector in your region immediately by phone, and submit an updated notification no later than the original start date. If the new start date is earlier than the original start date, update the notification at least ten weekdays before the new start date.

Detailed instructions for completing notifications are given on the back of DEP Form 7036. Additionally, any questions on notifications or other asbestos requirements may be directed to any Division for Air Quality Regional Office (offices are located in Ashland, Bowling Green, Hazard, Florence, Frankfort, London, Owensboro, and Paducah).

**For informational purposes only. Relying on this notice alone shall not guarantee full compliance with all legal requirements. This notice simply clarifies the notification provisions of 401 KAR 58:025.*

JAMES E. BICKFORD
SECRETARY

PAUL E. PATTON
GOVERNOR

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
FRANKFORT OFFICE PARK
14 REILLY RD
FRANKFORT KY 40601

January 17, 2001

Division of Waste Management

Comments for Project #SER02000-97

The Division of Waste Management would be concerned that all solid waste generated by these projects be disposed at a permitted facility.

Another concern is that during these types of projects, old regulated and non-regulated underground storage tanks may be encountered, as well as other contamination. Should tanks or contamination be encountered they must be properly reported and remediated.

JAMES E. BICKFORD
SECRETARY

PAUL E. PATTON
GOVERNOR

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
FRANKFORT OFFICE PARK
14 REILLY RD
FRANKFORT KY 40601

MEMORANDUM

TO: Alex Barber
State Environmental Review Officer
Department for Environmental Protection

FROM: Timothy Kuryla TK
EIS Coordinator
Division of Water

DATE: February 20, 2001

SUBJECT: SN, KY61, KY55, Columbia (Adair County), to US68, Greensburg (Green County), SERO 001229-97.02

IN GENERAL

The Division of Water has reviewed the Scoping Notice prepared by the Transportation Cabinet regarding the construction of KY61, KY55, Columbia (Adair County) to US68, Greensburg (Green County). The Division comments on matters the Division desires considered in the Environmental Assessment.

The applicant needs to consult, before construction can begin, with the U.S. Army Corps of Engineers to ascertain if a 33 USC § 1341 ("401") water quality certification by the Division of Water, or a 33 USC § 1344 ("404") dredge or fill material permit, or both, are required. Any impact to 200 linear feet or more of any stream or stream bank (below ordinary highwater) (as shown on U.S. Geological Survey 7.5 minute topographical maps for the project area) or one acre or more of any wetland, will require a "401" water quality certification. This includes excavations and impoundments.

Stream crossings except for Oustanding Resource Waters (ORWs), Cold water Aquatic Habitats (CAHs), and high quality waters are covered by a general certification. ORW, CAH, and high quality water stream crossings require an individual water quality certification and mitigation. Open channel stream locations will require restoration to natural conditions.

The Division of Water will require mitigation for stream loss (if more than 250 acres are involved above the construction impact) and for wetland loss (if more than 1 acre).

If a floodplain outside the right of way is involved, prior approval must be obtained from the Division of Water before construction may begin. The EA needs to address the impacts on flooding of each stream crossing, all fills in floodplains, and any channel relocation or alteration.

The submitted data are general. With specific data as are found in the Transportation Cabinet Land and Water Ecology Section "404" checklist, plus Corps of Engineers or Coast Guard Public Notice, the Division of Water may find a problem relating to floodplain construction and water quality. Therefore, the Division requests an opportunity to review, at the Preliminary Design stage, the land and water ecology checklist for the proposed project should it be funded. (If a Public Notice is prepared for the proposed project, the Division will review it).

The Division of Water notes the relevant portions of the Transportation Cabinet's Standard Specifications for Road and Bridge Construction are Sections 212 and 213. Section 212 governs the protection and stabilization of those areas exposed to erosion as the result of construction practices. Section 213 protects water quality by governing construction practices that can result in nonpoint source pollution.

The Division of Water finds that these guidelines adequately address possible highway construction impacts on aquatic habitat and propose appropriate mitigation measures that insure minimal sediment and other damage to water quality. These sections need to be cited in the EA.

The Division of Water recommends that the Transportation Cabinet use the Groundwater Sensitivity Regions of Kentucky map published by the Kentucky Geological Survey (KGS) to determine sensitive groundwater areas.

If sinkholes are modified for drainage, the Division of Water notes U.S. Environmental Protection Agency (EPA) requires an Underground Injection Control Permit (40 CFR §§ 144.11, 144.25, 146.51). The activity is classified as a Class V well (40 CFR § 144.6).

The Division of Water has data and maps regarding wellhead protection areas located throughout the Commonwealth. Highway design must take into account these areas.

Owners of onsite wastewater disposal systems must have Groundwater Protection Plans (GPP). Purchasing right of way lands on which these systems are located means assuming the obligations imposed by 401 KAR 5:037.

Deep road cuts can act as "French" drains. These cuts could drain aquifers that are used as domestic and public water supply sources. Highway design needs to take into account the location of these aquifers. The Division of Water maintains data on wells drilled since 1985 and of all wells it inspects.

James E. Bickford
Secretary

Paul E. Patton
Governor

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR NATURAL RESOURCES
DIVISION OF CONSERVATION
663 TETON TRAIL
FRANKFORT, KENTUCKY 40601

January 19, 2001

Ms. Annette Coffey, P.E.
Kentucky Transportation Cabinet
125 Holmes Street
Frankfort, KY 40622

Subject: Reconstruction of KY 61 from Greensburg to Columbia

Dear Ms. Coffey:

Per your request, the Division of Conservation has reviewed the project referenced above in order to provide comments and express concerns regarding your intermediate planning study. There are no agricultural districts established within or adjacent to the project area. Therefore, impacts to land enrolled in the Agricultural District Program will not have to be mitigated by the Department of Transportation.

We would, however, like to see the issue of loss of Prime Farmland and Farmland of Statewide Importance addressed in your study. There are three publications that could be utilized to identify these farmland designations: *The Soil Survey of Adair County* (NRCS 1964), *The Soil Survey of Green and Taylor Counties* (NRCS 1982) and *Important Farmland Soils of Kentucky* (NRCS 1985). These publications are available through this office.

One other concern we would like to comment on is that of controlling erosion and sedimentation during and after earth-disturbing activities once this project begins. We strongly recommend best management practices (BMPs) be utilized to prevent nonpoint source water pollution. This will protect the water quality and aquatic habitat of the numerous perennial and intermittent streams and drainage ways within the project area. *Best Management Practices for Construction Activities* is available through the Adair or Green County Conservation Districts, the Division of Water, or this office.

EDUCATION PAYS

Phone (502) 564-3080 Fax (502) 564-9195
EQUAL OPPORTUNITY EMPLOYER M/F/D

We appreciate the opportunity to comment on this project. If you have any questions or require further assistance, please contact this office anytime.

Sincerely,

Stephen A Coleman

Stephen A. Coleman, Director
Division of Conservation

SAC/MD/mg

A-2

Commonwealth of Kentucky
Transportation Cabinet
Frankfort, Kentucky 40622

James C. Codell, III
Secretary of Transportation

Paul E. Patton
Governor

E. Jeffrey Mosley
Deputy Secretary

MEMORANDUM

To: Annette Coffey, P.E., Director
Division of Planning

From: John L. Mettille, Jr., Director
Division of Environmental Analysis

Date: February 16, 2001

Re: Scoping Study - KY 61 Southern Corridor located in Adair and Green Counties, KY Item # 4-128.00

The proposed improvements to KY 61 from Greensburg to Columbia, Kentucky have been evaluated by the Division of Environmental Analysis for any potential environmental challenges that would need to be addressed during the design stage. The following brief set of preliminary comments are based upon the planning study data presented, additional comments could be provided if/when site visits are conducted:

1. The Air Quality status of the project likely would not be a problem; the project appears to be outside of the area requiring conformity. The planning study should clearly state that the project originates from the latest conforming STIP.
2. Streams appear to be present throughout the project corridor. Impacts to these areas should be avoided. These areas would likely require individual permits and/or have to be avoided during the design process.
3. Impacts to potential prehistoric archaeological sites within the area should be avoided or minimized.
4. Specific details concerning unknown HAZMAT , storage tanks and abandoned oil wells would need to be obtained through a thorough site assessment.
5. Potential section 4(f) and 106 issues exist. Several National Register sites including a historic bridge and a cemetary are located within the project corridor; impacts to these resources should be avoided/minimized.
6. The project could have a high number of relocations, especially if there are other projects in the area.

EDUCATION PAYS

Our staff appreciates the opportunity to provide early comments on projects during the planning stage. If you should have any questions regarding these comments please contact Tony Vinegar or me at 564-7250.

JLM/TV

C: R. Morris R. Dutton Files

Commonwealth of Kentucky
Transportation Cabinet
Frankfort, Kentucky 40622

James C. Codell, III
Secretary of Transportation

T. Kevin Flanery
Deputy Secretary

Paul E. Patton
Governor

MEMORANDUM **P-6-2001**

TO: Annette Coffey, P.E.
Director
Division of Planning

FROM: Jim Stone, P.E. Jim Stone
Director
Division of Material

BY: R.T. Wilson, P.G. R.T.W
Geotechnical Branch

DATE: January 9, 2001

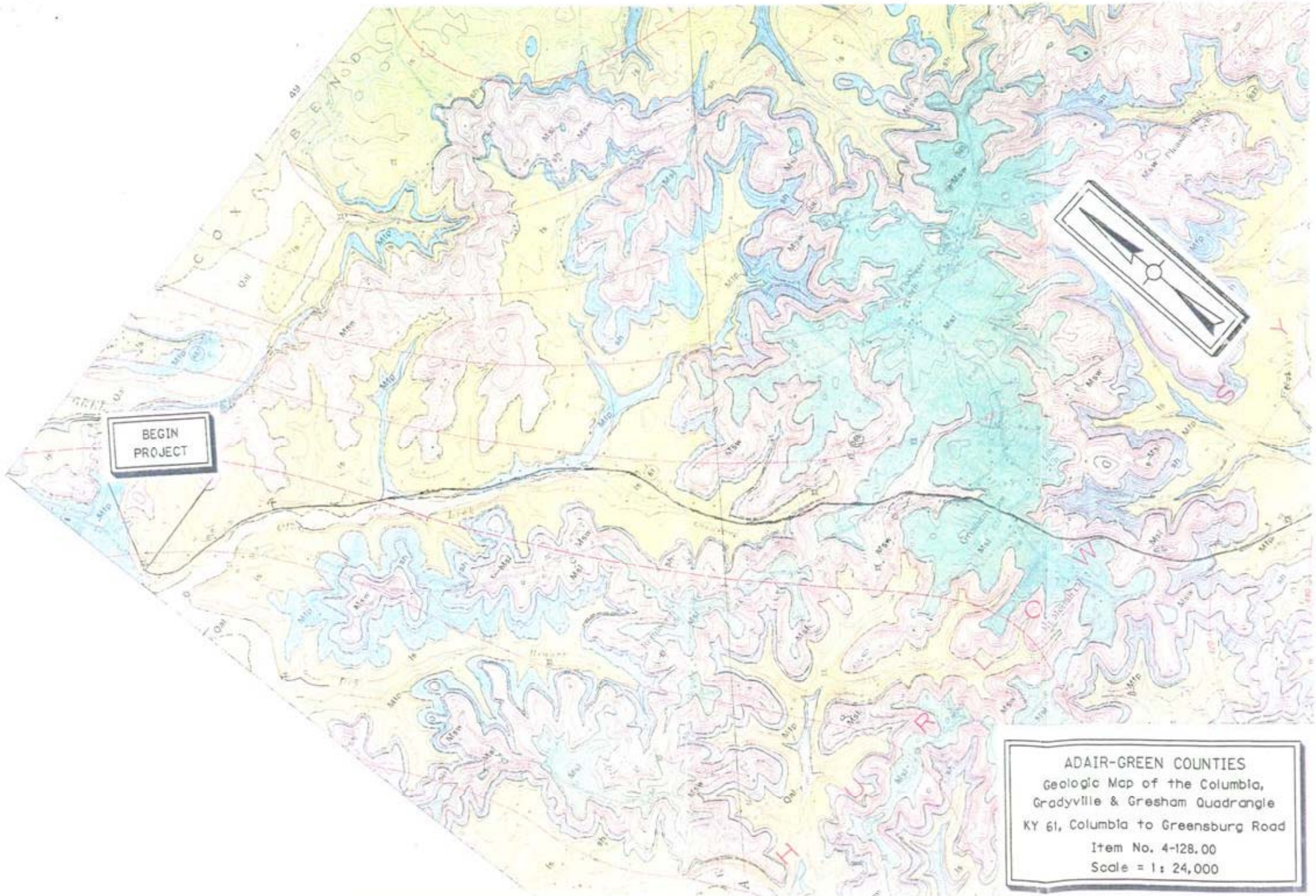
SUBJECT: Adair/Green Counties
KY61, Columbia to Greensburg Rd.
Intermediate Planning Study
Item No. 4-128.00

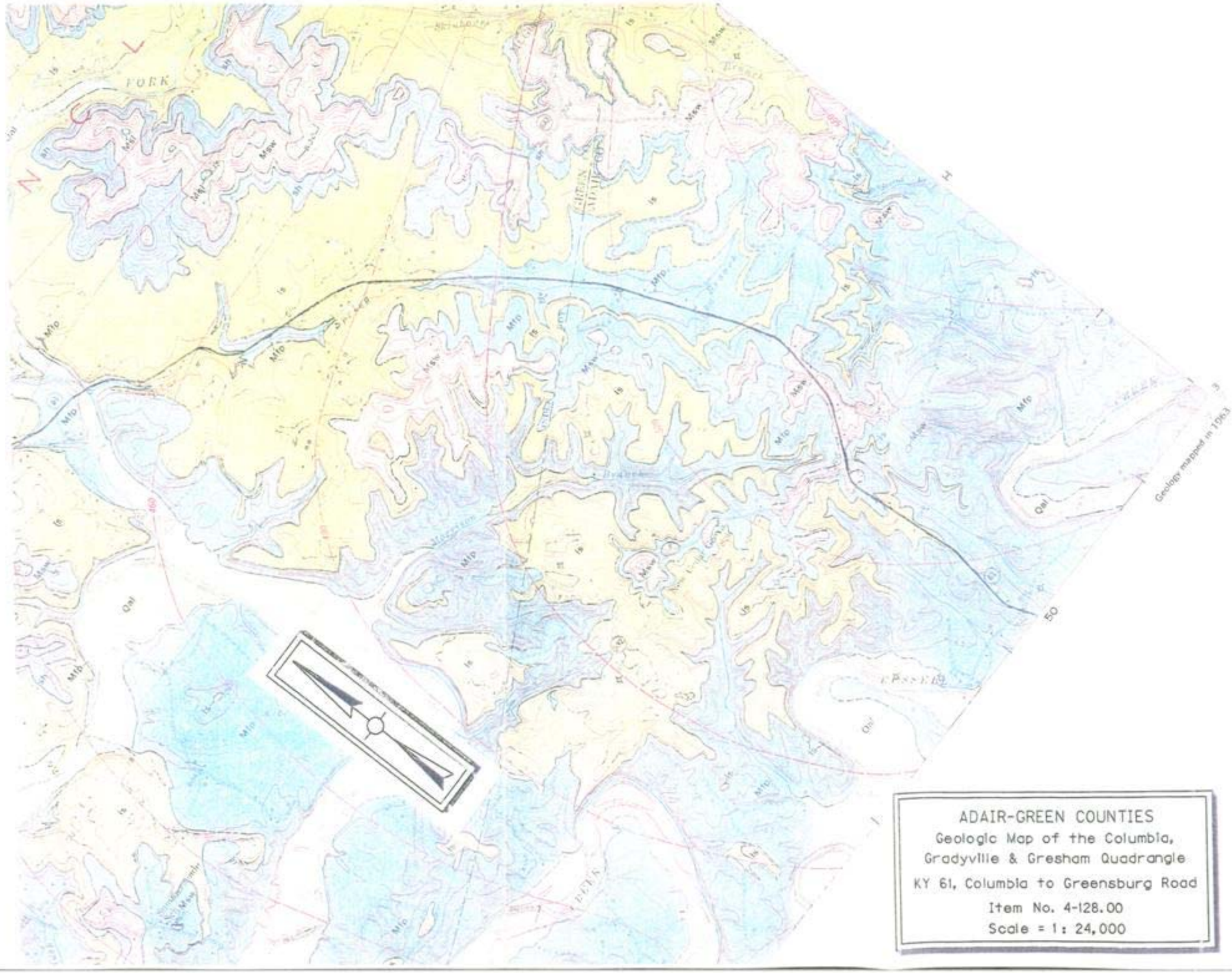
At your request, personnel from the branch completed a preliminary office review of the subject project. The project is located in the Mississippian Age St. Louis Limestone, Salem/Warsaw Limestone and the Fort Payne Formation.

The St. Louis Limestone unit, Salem/Warsaw Limestone and limestone section of the Fort Payne have some sinkholes, cave systems and a highly variable rockline. Soil depths greater than ten (10) feet are anticipated. The remainder of the Fort Payne Formation consists of siltstone, which has some interbedded dolomitic sections and shallow soil depths are anticipated. An alignment that minimizes contact with the limestones is advisable. Due to the variability of soil depth, length of the project, and rolling terrain, not all sections may have sufficient rock available for highway uses.

This project is located in seismic zone 2, which is defined as a moderate damage area.

If there are questions please advise.


BEGIN
PROJECT
COLUMBIA
ADAIR-GREEN COUNTIES
Geologic Map of the Columbia,
Gradyville & Gresham Quadrangle
KY 61, Columbia to Greensburg Road
Item No. 4-128.00
Scale = 1: 24,000



ADAIR-GREEN COUNTIES
Geologic Map of the Columbia,
Gradyville & Gresham Quadrangle
KY 61, Columbia to Greensburg Road
Item No. 4-128.00
Scale = 1: 24,000

EXPLANATION

	Qal	Alluvium	QUATERNARY
Upper Mississippian	Msl	St. Louis Limestone	MISSISSIPPIAN, CARBONIFEROUS
Upper Mississippian	Msw	Salem and Warsaw Limestones	MISSISSIPPIAN, CARBONIFEROUS
Lower Mississippian	ls, Mfp	Fort Payne Formation ls, limestone	MISSISSIPPIAN, CARBONIFEROUS
Upper Devonian	Dc	Chattanooga Shale	DEVONIAN

Contact
Dashed where approximately located; short dashed where inferred, indefinite or gradational dotted where concealed

Strike and dip of crossbedding
Shown only in Fort Payne Formation. Generalized where no numerical value is given

600

Structure contours
Drawn on top of Chattanooga Shale. Long dashed where

END PROJECT

ADAIR-GREEN COUNTIES
Geologic Map of the Columbia, Gradyville & Gresham Quadrangle
KY 61, Columbia to Greensburg Road
Item No. 4-128.00
Scale = 1: 24,000

Commonwealth of Kentucky
Transportation Cabinet
Frankfort, Kentucky 40622

James C. Codell, III
Secretary of Transportation

E. Jeffrey Mosley
Deputy Secretary

Paul E. Patton
Governor

MEMORANDUM

TO: Annette Coffey, Director
Division of Planning

FROM: Michael L. Hill, Director
Division of Multimodal Programs

DATE: January 10, 2001

SUBJECT: Reconstruction of KY 61 from Greensburg to Columbia

Thank you for the opportunity to comment on the intermediate planning study for the above subject.

The project area concerning the study is neither within nor contiguous to a Metropolitan Planning Organization (MPO) or a Small Urban Area (SUA). Therefore, this Division does not have any valuable comments regarding this study.

The Division of Planning's efforts to streamline construction projects by involving all stakeholders in the project development phases are commendable. We look forward to working with your Division to facilitate your study efforts in our SUA and MPO areas.

MLH/LJS/AJT

Commonwealth of Kentucky
Transportation Cabinet
Frankfort, Kentucky 40622

James C. Codell, III
Secretary of Transportation

Paul E. Patton
Governor

E. Jeffrey Mosley
Deputy Secretary

MEMORANDUM

TO: Annette Coffey, P.E.
Director
Division of Planning

FROM: Edward Sue Perkins, P.E.
Branch Manager
Permits Branch

DATE: January 26, 2000

RE: Reconstruction Project
KY 61 from Greensburg to Columbia

The Permits Branch has reviewed the data provided for subject study site and wish to offer the following.

1. We urge the Cabinet to make this all-new facility partial control access.

2. Assuming the project is partial control access, we encourage all possible access points be set on the plans in accordance with 603 KAR 5:120, even if they are not to be constructed at that time.

3. When buying R/W for this ad all reconstruction routes, assuming the access control is partial control, new deeds for all adjoining property owners even if no new R/W is acquired, need to be executed to identify the access control.

4. In addition, we would like to make every effort possible to have the design speed to be the same as anticipated posted speed when the project is complete.

5. We would like to see access control fence installed with the project.

Thank you for the opportunity to verbalize our concerns.

ESP/tm

Noe, Ted (KYTC)

From: Dixon, Carl (KYTC)
Sent: Thursday, January 25, 2001 1:37 PM
To: Wilson, Jim (KYTC); Noe, Ted (KYTC); Greer, Daryl (KYTC)
Subject: FW: KSNPC response to KIRPs

For your info ...

-----Original Message-----
From: Coffey, Annette (KYTC)
Sent: Wednesday, January 24, 2001 10:00 PM
To: Dixon, Carl (KYTC)
Subject: FW: KSNPC response to KIRPs

-----Original Message-----
From: Palmer-Ball, Brainard (NREPC, KSNPC)
To: Coffey, Annette (KYTC)
Sent: 01/24/2001 4:36 PM
Subject: FW: KSNPC response to KIRPs

FYI:

>----------
>From: Palmer-Ball, Brainard (NREPC, KSNPC)
>Sent: Wednesday, January 24, 2001 4:35 PM
>To: Barber, Alex (NREPC, DEP)
>Subject: KSNPC response to KIRPs
>
>TO: Alex Barber, NREPC-DEP, Intergovernmental Review Coordinator
>
>FROM: Brainard Palmer-Ball, Jr., Ky State Nature Preserves Commission
>
>RE: KSNPC responses to KIRPs
>
>DATE: January 24, 2001
>_____
>
>
>RE: Project No. SERO2000-97.1 (Improvements to KY 737 from Leitchfield,
>Grayson Co. to KY 259, Breckinridge Co.)
>
>KSNPC has reviewed the project proposal and has NO COMMENT.
>
>
>
>RE: Project No. SERO2000-97.2 (Reconstruction of KY 61 from Greensburg,
>Green Co. to Columbia, Adair Co.)
>
>KSNPC has reviewed the project proposal and notes the presence of
>several rare species that have been documented to occur within the
>project area that could be impacted by its implementation. These

>include the Gray bat (Myotis grisescens, Federal and KSNPC Endangered)
>and several rare aquatic species in Russell Creek including Kentucky
>creekshell (Villosa ortmanni, KSNPC Threatened). Potential for impacts
>to these species and the water quality in Russell Creek should be
>assessed during planning for this project.
>
>
>
>RE: Project No. SERO2000-97.3 (Construction of northwestern connector
>from KY 55 to US 68 at Lebanon, Marion Co.)
>
>KSNPC has reviewed the project proposal and has NO COMMENT.
>
>
>
>RE: Project No. SERO2001-01 (Reconstruction of US 460 from KY 599 in
>Montgomery Co. to KY 713 in Means, Menifee Co.)
>
>KSNPC has reviewed the project proposal and has NO COMMENT.
>
>

UNIVERSITY OF KENTUCKY

W. S. Webb Museum of Anthropology
Office of State Archaeology
College of Arts and Sciences
211 Lafferty Hall
Lexington, KY 40506-0024
(859) 257-8208
Fax: (859) 323-3686
www.uky.edu

January 4, 2001

Ms. Annette Coffey, P.E.
Director, Division of Planning
Kentucky Transportation Cabinet
125 Holmes Street
Frankfort, Kentucky 40622

Subject: Item No. 4-128.000 (KY 61 Scoping Study from Greensburg to Columbia)

Dear Ms. Coffey:

Concerning the above referenced projects, I recommend that archaeological investigations be conducted to determine if significant archaeological sites will be impacted by proposed alternatives that will result in land modification.

Sincerely,

James P. Fenton, Ph.D
Director
Office of State Archaeology and
W.S. Webb Museum of Anthropology

(13)

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, LOUISVILLE
CORPS OF ENGINEERS
P.O. BOX 59
LOUISVILLE, KENTUCKY 40201-0059
FAX: (502) 315-6677

March 2, 2001

Operations Division
Regulatory Branch (South)
ID No. 200100007-pjl

Ms. Annette Coffey, P.E.
Kentucky Transportation Cabinet
Division of Planning
125 Holmes Street
Frankfort, Kentucky 40622

Dear Ms. Coffey:

This is in response to your letter of December 22, 2000, requesting early coordination for a proposal to reconstruct KY 61 from Greensburg in Green County to Columbia in Adair County, in Kentucky. The Corps of Engineers exercises regulatory authority under Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403) and Section 404 of the Clean Water Act (33 USC 1344).

The project area encompasses several streams and a number of adjacent wetlands that are subject to our jurisdiction. However, the information given is insufficient for us to be certain of the need for a permit on this particular proposal. We will need additional detail on the project's design, scope, construction methods and purpose in order to determine whether a permit is required.

We have found it is usually in the applicant's best interest to submit that data in a formal permit application. Should an individual permit be required, we can then begin processing your request immediately.

Enclosed is a packet, which contains the information and forms, needed to apply for a DA permit. Currently, the processing time for non-controversial applications requiring individual review takes approximately 90 days. Please allow sufficient time in your preconstruction schedule for the processing of a DA permit application.

If we can be of any further assistance, please contact us by writing to the above address, ATTN: CELRL-OP-FS, or by calling me at (502) 315-6692.

Sincerely,

Pam Loeffler

Pam Loeffler
Regulatory Specialist
Regulatory Branch

Enclosures

U.S. Department of Transportation
United States Coast Guard

Commander
Eighth Coast Guard District

1222 Spruce Street
St. Louis, MO 63103-2832
Staff Symbol: obr
Phone: (314) 539-3900, Ext 382
FAX: (314) 539-3755

16593.22
4 January 2001

Ms. Annette Coffey, P.E.
Director, Division of Planning
Commonwealth of Kentucky
Transportation Cabinet
125 Holmes Street
Frankfort, KY 40622

Subj: RECONSTRUCTION OF KY 61 FROM GREENSBURG TO COLUMBIA PROJECT

Dear Ms. Coffey:

Please refer to your letter of December 22, 2000. After reviewing the plans that you submitted we have determined that this project does not cross waterways over which the Coast Guard exercises jurisdiction for bridge administration purposes. A Coast Guard bridge permit is not required.

I appreciate the opportunity to comment on the proposed reconstruction of KY 61 project. Should you have any questions, contact Mr. David Orzechowski at (314) 539-3900 Ext. 382.

Sincerely,

ROGER K. WIEBUSCH
Bridge Administrator
By direction of the District Commander

Department of Energy
Washington, DC 20585

JAN 25 2001

Ms. Annette Coffey, P.E.
Director
Division of Planning
Transportation Cabinet
Commonwealth of Kentucky
Frankfort, KY 40622

Dear Ms. Coffey:

Thank you for the opportunity to comment on the proposed highway projects in your state. In general, road upgrades to improve safety are a benefit to shippers and usually pose no problems to Department of Energy shipments during construction, assuming appropriate detours are available if necessary.

The Department does have an interest in roadway safety, and the proposed projects contemplated in Kentucky should contribute to the safety of all shipments, not just the Department's potential shipments. However, since most of the Department's shipments use interstate highways, we do not contemplate any of our shipments being impacted by the proposed actions (see attachment), and have identified no other concerns at this time.

As part of our overall transportation policy, we provide advance notification to State Governors' designees for highway route controlled quantity shipments of radioactive materials. We also have other contacts through the Southern States Energy Board with Kentucky about the Department's plans for future shipments. If you have any questions about the Department's transportation program, please review our web site at www.ntp.doe.gov, where we provide an annual update of shipments through each state, or contact Ms. Tracy Mustin, Director, Office of Transportation, at (202) 586-0671.

Sincerely,

David G. Huizenga
Deputy Assistant Secretary
for Integration and Disposition
Office of Environmental Management

Attachment

Attachment:

Response to the following:

Letter dated December 21, 2000, referring to the proposed construction of a northwestern connector from Corporate Drive (KY 2154) at KY 55 to US 68 west of Lebanon in Marion County.

Letter dated December 22, 2000, referring to proposed reconstruction of KY 61 from Greensburg to Columbia.

Letter dated December 22, 2000, referring to proposed improvements to KY 737 from north of Leitchfield to the junction of KY 259 in Grayson and Breckinridge Counties.

Letter dated December 28, 2000, referring to proposed reconstruction of US 460 from KY 599 in Jeffersonville to KY 713 in Means, Montgomery, and Menifee Counties.

U. S. Department of Housing and Urban Development
Kentucky State Office
Office of the State Coordinator
P.O. Box 1044
Louisville, KY 40201
502-582-5251 Fax 502-582-6074
KY TDD Relay Service 800-648-6056
www.hud.gov/kentucky.html

January 9, 2001

Ms. Annette Coffey, P.E.
Director, Division of Planning
Kentucky Transportation Cabinet
125 Holmes Street
Frankfort, KY 40622

Dear Ms. Coffey:

We are responding to the planning study and potential impact of KY 61 from Greensburg to Columbia. We appreciate the Department of Transportation's continued efforts of informing and giving the Kentucky State HUD Office the opportunity to respond to your projects and/or studies.

After reviewing the maps as well as discussing the matter with the Division Directors here in our office, there does not seem to be any obvious negative impact upon HUD programs or constituency at this time.

We would, however, like to be informed if the alternative improvements that were mentioned in your correspondence are considered further. HUD does have projects in Adair and Green Counties and welcomes the opportunity to review any material that the Transportation Cabinet deems as having potential impact.

Sincerely,

John Milchick, Jr.
Kentucky State Coordinator

U.S. Department
of Transportation
**Federal Aviation
Administration**

Airports District Office, FAA
3385 Airways Blvd., Suite 302
Memphis, Tennessee 38116-3841
(901) 544-3495 FAX: (901) 544-4243
Email: 9.aso-mem-ado@faa.gov

January 22, 2001

Ms. Annette Coffey, P. E., Director
Division of Planning
Kentucky Transportation Cabinet
125 Holmes Street
Frankfort, KY 40622

Dear Ms. Coffey:

This is in response to your letters to Ms. LaVerne Reid requesting information on any impacts concerning the following construction projects in the State of Kentucky identified in part by the date of the letter from you to Ms. Reid:

1. letter dated November 17, 2000 concerning the extension of the Flemingsburg Bypass from KY 11 to the Tollesboro – Mt. Carmel Road (KY 52).
2. Letter dated December 21, 2000 concerning the construction of a northwestern connector from Corporate Drive (KY 2154) at KY 55 to US 68 west of London in Marion County.
3. Letter dated November 29, 2000 concerning the reconstruction of KY 101 from Smith's Grove North to its junction with US 31W.
4. Letter dated December 28, 2000 concerning the reconstruction of US 460 from KY 599 in Jeffersonville to KY 713 in Means, Montgomery, and Menifee counties.
5. Letter dated December 22, 2000 concerning the improvements to KY 737 from north of Leitchfield to the junction of KY 259 in Grayson and Breckinridge counties.

There are no public use airports in the vicinity of the proposed projects identified above as items 1 through 5. As long as construction activities do not exceed 200 feet in height above ground level, there will be no impacts on Federal Aviation Administration programs and no Notice of Proposed Construction will be required.

6. Letter dated December 22, 2000 concerning the reconstruction of KY 61 from Greensburg to Columbia.

The Columbia – Adair County Airport appears to be located approximately 2,600' from the proposed project. It is recommended that you review the instructions on the enclosed FAA Form 7460-1, "Notice of Proposed Construction or Alteration" to see if there is a need to formally notify the FAA of the project. If so, it is requested that you use the enclosed Form 7460-1 to provide the type of information we need to assess impacts on the airport.

Thank you for the opportunity to review the proposal.

Sincerely,

Michael L. Thompson
Program Manager

United States Department of the Interior

FISH AND WILDLIFE SERVICE
446 Neal Street
Cookeville, TN 38501

January 19, 2001

Ms. Annette Coffey
Director, Division of Planning
Kentucky Transportation Cabinet
Frankfort, Kentucky 40622

Dear Ms. Coffey:

Thank you for your letter and enclosures of December 22, 2000, concerning the proposed improvement of KY-61 from Greensburg to Columbia in Green and Adair Counties, Kentucky. Fish and Wildlife Service (Service) personnel have reviewed the information submitted and the following comments are provided in accordance with the provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.) and the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.).

The Service is concerned that highway projects frequently accelerate erosion and sedimentation in streams, resulting in adverse effects to the aquatic environment. The use of heavy equipment to move earth and existing vegetation disrupts natural drainage patterns and exposes large areas of disturbed soil to erosion. Excessive sedimentation can clog stream channels and contribute to increased flooding. It can also increase water temperatures and cause oxygen demands which can damage or destroy fish and invertebrate populations. Deposition of sediment on the channel bottom also degrades aquatic habitat by filling in substrate cavities, burying demersal eggs, and smothering bottom organisms. In addition, turbidity, as induced by accelerated erosion and sedimentation, results in further damage to aquatic systems. Increased particulate matter suspended in the water column may drive fish from the polluted area by irritating the gills, concealing forage, and/or destroying vegetation that may be essential for spawning and cover habitat for particular species. Turbidity also degrades water quality by reducing light penetration, pH and oxygen levels, and the buffering capacity of the water. Degraded water quality may continue far downstream from the point where the erosion occurs.

Prevention of excessive sedimentation can occur only through application of Best Management Practices during daily construction activities. Rigid application of your agency's construction erosion control standards can preclude most sedimentation problems; however, in some cases additional measures will need to be taken by on-site inspectors and construction representatives.

Upon review of the proposed projects, we find that the information provided is insufficient to determine if the proposed actions will require U.S. Army Corps of Engineers' permits. Since permit applications could more thoroughly reveal the extent of construction activities affecting aquatic resources, we will provide additional comments during the 404 review process should the project necessitate Corps' permits. However, we would likely have no objection to the issuance of permits if any necessary stream channel work is held to a minimum and Best Management Practices are utilized and enforced, effectively controlling erosion, sedimentation, and other potential hazards. The following conditions are specifically recommended:

1. Erosion and sediment control measures, including but not limited to the following, should be implemented on all vegetatively denuded areas:

    a. Preventive planning: A well-developed erosion control plan which entails a preliminary investigation, detailed contract plans and specifications, and final erosion and sediment control contingency measures should be formulated and made a part of the contract.

    b. Diversion channels: Channels should be constructed around the construction site to keep the work site free of flow-through water.

    c. Silt barriers: Appropriate use should be made of silt fences, hay bale and brush barriers, and silt basins in areas susceptible to erosion.

    d. Temporary seeding and mulching: All cuts and fill slopes, including those in waste sites and borrow pits, should be seeded as soon as possible.

    e. Limitation of instream activities: Instream activities, including temporary fills and equipment crossings, should be limited to those absolutely necessary.

2. Concrete box culverts should be placed in a manner that prevents any impediment to low flows or to movement of indigenous aquatic species.

3. Channel excavations required for pier placement should be restricted to the minimum necessary for that purpose. Overflow channel excavations should be confined to one side of the channel, leaving the opposite bank and its riparian vegetation intact.

4. All fill should be stabilized immediately upon placement.

5. Streambanks should be stabilized with riprap or other accepted bioengineering technique(s).

6. Existing transportation corridors should be used in lieu of temporary crossings where possible.

7. Good water quality should be maintained during construction.

Efficient management practices can minimize adverse impacts associated with construction. It is important that these and other measures be monitored and stringently enforced. This will aid in preserving the quality of the natural environment.

Endangered species collection records available to the Service do not indicate that federally listed or proposed endangered or threatened species occur within the impact area of the project. We note, however, that collection records available to the Service may not be all-inclusive. Our data base is a compilation of collection records made available by various individuals and resource agencies. This information is seldom based on comprehensive surveys of all potential habitat and thus does not necessarily provide conclusive evidence that protected species are present or absent at a specific locality. However, based on the best information available at this time, we believe that the requirements of Section 7 of the Endangered Species Act of 1973, as amended, are fulfilled. Obligations under Section 7 of the Act must be reconsidered if (1) new information reveals impacts of the proposed action that may affect listed species or critical habitat in a manner not previously considered, (2) the proposed action is subsequently modified to include activities which were not considered during this consultation, or (3) new species are listed or critical habitat designated that might be affected by the proposed action.

Thank you for giving us the opportunity to comment on these actions. If you have any questions, please contact Jim Widlak of my staff at 931/528-6481, ext. 202, or via email at *james_widlak@fws.gov*.

Sincerely,

Lee A. Barclay, Ph.D.
Field Supervisor

APPENDIX H.
ENVIRONMENTAL RESOURCE INFORMATION

Environmental Resource Information
for
Preliminary Environmental Footprint
KY 61 Scoping Study

GIS Data

Various databases were used to construct the environmental footprint, and were obtained from several state and federal agencies. The following sections summarize the databases provided by each agency.

After the databases were obtained, they were grouped into seven analytical categories: Culturally Sensitive Locations, Environmental Concerns, Geological Information, Historic Structures and Archaeological Sites, Hydrology, Managed Land Areas, and Threatened and Endangered Species. Each category contains GIS databases that share similar components. For example, all GIS databases that contain information about potential environmental problems are grouped together under Environmental Concerns. A brief description of each group follows.

Culturally Sensitive Locations

Culturally Sensitive Locations are based on the Geographic Names Information System (GNIS) point database obtained from the United States Geological Survey (USGS). This database contains the geographic names for all known places, features, and areas in the United States that are identified by a proper name. From this database, all point locations described as either cemeteries, churches, hospitals, or schools are identified. Additional data was gathered from Digital Raster Graphic (DRG) 1:24,000 topographical maps. A visual scan of these maps was performed and any features not recorded in the GNIS database were entered into a database for analysis. Any additional pertinent information observed on these maps is also recorded and incorporated into the analysis.

Environmental Concerns

Data items in this group originate from state and federal regulatory agencies. The majority of the data was obtained from the Environmental Protection Agency (EPA). These databases include Comprehensive Environmental Response, Compensation & Liability (CERCLIS), Facility Identification Initiative System (FINDS), Emergency Response Notification System (ERNS), Permit Compliance System (PCS), Toxic Release Inventory System (TRI), and the Resource Conservation and Recovery Information System (RCIS). The CERCLIS data contains information about the Superfund program administered by the EPA. Included types are abandoned warehouses, manufacturing facilities, processing plants, and landfills where hazardous wastes were left in the open, seeped into the ground, flowed into rivers and lakes, and contaminated soil and ground water. The FINDS database is a management system developed by the EPA to manage reliable and consistent facility information and to make this information available for public access, data integration, and sharing among stakeholders. ERNS is a database used to store information on notifications of oil discharges and hazardous substance releases. The PCS database contains information on companies that have been issued permits to discharge wastewater into rivers. The TRI database contains information about more than 650 toxic chemicals that are being used, manufactured, treated, transported or released into the environment. And the RCRIS database is a national program management and inventory system about hazardous waste handlers. In general, all generators, transporters,

treaters, stores, and disposers of hazardous waste are included. These EPA databases are routinely updated. Data used for this analysis was current on March 16, 2000.

The databases maintained by the Kentucky Natural Resources and Environmental Protection Cabinet used in this analysis consists of several different types of point data. They are Permitted Landfills, Public Water Supplies, Sewage Treatment Plants, and Tire Dump Locations.

An additional database maintained by the Kentucky Natural Resources and Environmental Protection Cabinet is the Underground Storage Tank (UST) database. Unfortunately, this database does not have spatial coordinates already assigned to the data. To geographically place the data, the database was geocoded using ESRI's ArcView and StreetMap programs. This method attempts to match the address for the attribute with a relative address identified within the StreetMap data. The result is a geocoded spatial database of UST.

Geological Information

The GIS databases considered as part of the Geologic Information category were obtained from several state and federal agencies. A number of databases maintained by the Kentucky Geological Survey (KGS) were utilized in this analysis. They include point locations for Coal Exploration Sites, Oil and Gas Well locations along with Fault lines. The data from the U.S. Office of Surface Mining - Abandoned Mine Land Program consists of the approximate point locations of abandoned mines. The GNIS database was also examined and geological feature points were identified. A visual inspection of the Digital Raster Graphic (DRG) was completed and features not listed in the GNIS data were compiled in a separate database.

Historic Structures and Archaeological Sites

The Kentucky Heritage Council's database of historical structures constitutes the majority of the data for recorded Historical Structures in Kentucky. This comprehensive database is supplemented by the sites listed in National Park Service's catalog of the National Register of Historic Places. For the Kentucky Heritage Council's listing, a distinction is made between those sites that are listed on the National Register and those that are not.

The Kentucky Heritage Council also provides the archaeological sites database. The location of each archaeological site was determined by its recorded UTM coordinate. The level of accuracy for the UTM coordinates, however, has not been evaluated. Furthermore, not all sites have coordinate data. As a result, the locations for some of the archaeological sites, then, are suspect or not attainable. For this analysis, a distinction is made between those archaeological sites that are listed on the National Register and those that are not listed.

Hydrology

This group is comprised of data from three regulating agencies: the Kentucky Department of Fish and Wildlife, the Kentucky Natural Resources and Environmental Protection Cabinet, and the U.S. Army Corps of Engineers.

The Kentucky Department of Fish and Wildlife maintains wetland data. The summarized attributes from this database are based on a distinction between Lacustrine (deepwater habitats), Palustrine (shallow water habitats), and Riverine (flowing water habitats).

The blue-line stream database was secured from the Kentucky Natural Resources and Environmental Protection Cabinet. The blue-line streams are grouped into two sets, based on the flow order of the stream. Those with an order of 1-4 are grouped together and those with an order of 5 comprise the other set.

The databases provided by the U.S. Army Corps of Engineers consist of point locations for Corps regulated dams, locks, and ports. The Corps' database made a further distinction of ports, dividing them into categories of public or private ports.

Managed Land Areas

Managed land area data consists of land that is managed by a regulating agency such as the National Forest Service and the U.S. Army Corps of Engineers. The Kentucky Department of Natural Resources and Environmental Protection provided the databases for state forests, state parks, and wildlife management areas. The National Park Service and National Forest Service also provided location databases for their properties. The Bureau of Transportation Statistics provided military base locations.

Threatened and Endangered Species

The Kentucky State Nature Preserves Commission maintains a database of Threatened and Endangered Species. A threatened species is any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range (The Endangered Species Act of 1973). In addition, an endangered species is any species that is in danger of extinction throughout all or a significant portion of its range (The Endangered Species Act of 1973). The Kentucky State Nature Preserves Commission database includes information on rare and sensitive plants, animals, and other natural features.

APPENDIX I.
ENVIRONMENTAL JUSTICE INFORMATION

Environmental Justice Review

KY-61 From Columbia To Greensburg Project

January 25, 2001

Prepared for:
Kentucky Transportation Cabinet

By:
Lake Cumberland Area Development District
Post Office Box 1570
Russell Springs, Kentucky 42642

INTRODUCTION:

The following information is a review of current community and environmental conditions for Green and Adair Counties along the KY-61 corridor. Data presented in this report comes from a variety of sources including the U.S. Census Bureau, Local Elected Officials, and various community groups. The information contained herein is intended to assist the Kentucky Transportation Cabinet to avoid potential negative impacts to minority, elderly, and low income residents along the KY-61 planning study area.

METHODOLOGY:

Data for this study was collected through a variety of methods. Census data was collected each census tract and block group in both Adair and Green County. Population, age, and poverty statistics were compared between census divisions in order to locate possible high concentration areas. The results of the comparisons are included in this document.

In addition to census data, several local officials and community groups were contacted to provide additional information regarding the project area. A listing of these contacts has been provided.

Finally, GIS was utilized to determine the project location with respect to census boundaries. GIS data was also used to locate schools, businesses, and landmarks on the proposed routes. Maps containing project location, census tracts, and census block groups have been included.

BUSINESS/INDUSTRY:

KY-61 serves as the major connector between Columbia and Greensburg. This route also provides these cities with connections to Burkesville, Elizabethtown, and both the Louis B. Nunn and Lincoln Parkways. While the route is primarily occupied by residential and agricultural areas, it is also home to a few business and industrial establishments. Major businesses along the route include a truck facility, a rock quarry, a construction company, lumber mills, and a few small businesses. The vast majority of business on the route however is small family farming.

POPULATION/CENSUS DATA:

Examination of the census data reveals higher levels of poverty in Adair and Green County than in the state as a whole. However, this data appears to be reasonable consistent from census tract to census tract, and not concentrated in one area. The same is true for the elderly population, which is somewhat higher in the two counties than for the state.

Minority populations in the Adair and Green County tend to be significantly lower than the state average. Examination of the affected census tracts and block groups does reveal some areas where minority numbers are slightly higher than county averages, but these numbers do not appear to represent large concentrations or minority communities.

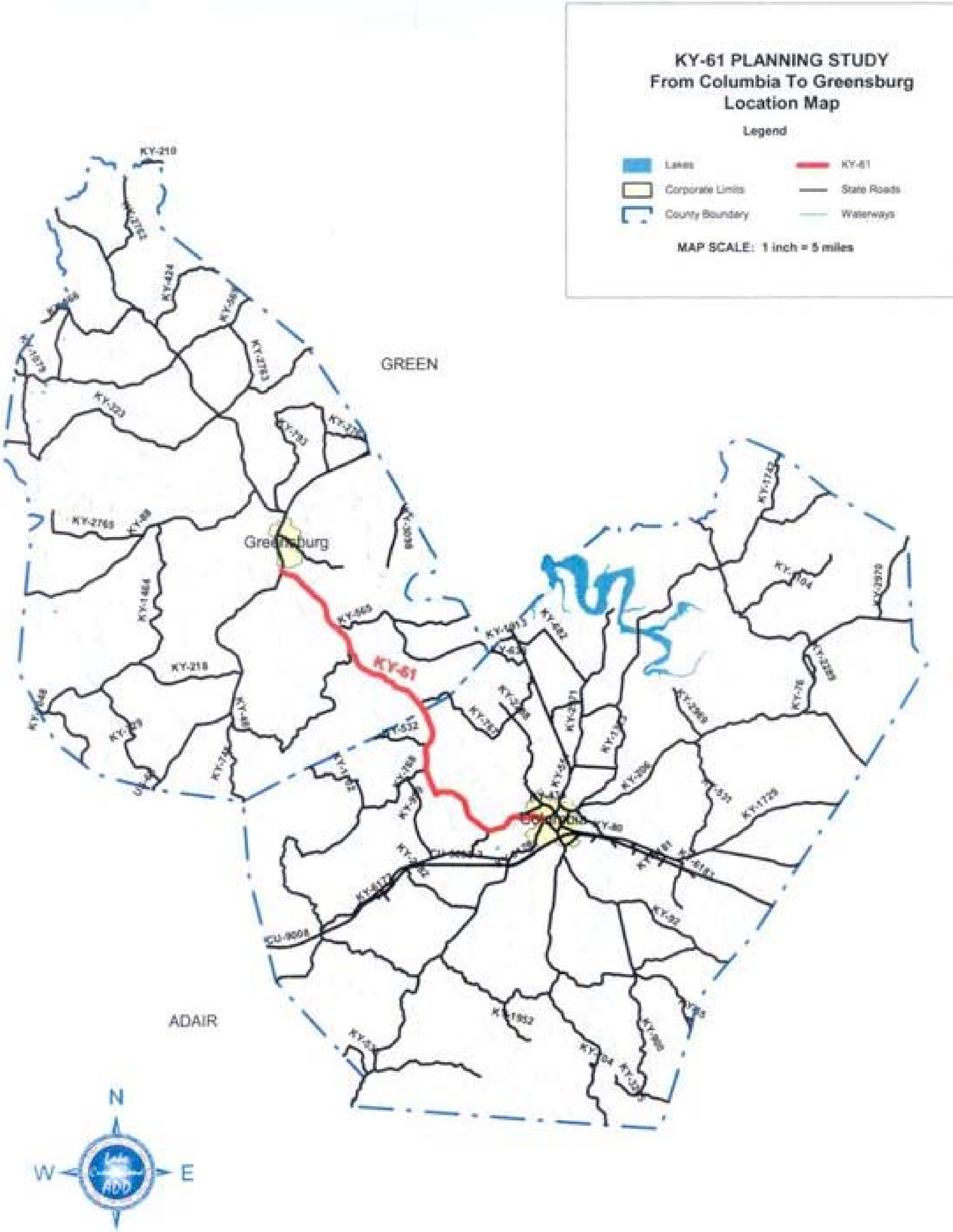
These findings are backed up by the results of interviews with local officials and organizations. Every person contacted in the course of this study described the area as a sparsely

populated, rural agrarian area. No true concentrations of any one demographic group are evident. The typical setting consists of a mixture of incomes and age groups spread along the KY-61 route. Most persons interviewed tended to believe that reconstruction of this route would impact minority, low income, and elderly persons in a positive way, by providing greater access to safe transportation facilities.

The vast majority of the data, census and local community, gives a strong sense that reconstruction of KY-61 from Columbia to Greensburg will have no significant impacts on any one group of people.

KY-61 PROJECT CONTACT LIST

NAME	ADDRESS	PHONE
Jerry Vaughan Adair County Judge/Executive	424 Public Square, Suite 1 Columbia, KY 42728	270-384-4703
Mary Ann Baron Green County Judge/Executive	Green County Courthouse Greensburg, KY 42743	270-932-4024
Mayor Curtis Hardwick City of Columbia	116 Campbellsville Street Columbia, KY 42728	270-384-6183
Ralph Curry Adair County Sheriff	500 Public Square Columbia, KY 42728	270-384-2776
Schella Pittman Adair County Water District	109 Grant Lane Columbia, KY 42728	270-384-2181
Greg Bardin Transportation Director, Adair County Schools	Greensburg Street Columbia, KY 42728	270-384-3312
Gerald Haselwood Transportation Director, Green County Schools	West Court Street Greensburg, KY 42743	270-932-5231
Ronnie Milby Assistant County Road Supervisor for Green County	Green County Courthouse Greensburg, KY 42743	270-932-5440
Mary Ann Larimore Green-Taylor Water District	250 Industrial Drive Greensburg, KY 42743	270-932-4947


KY-61 PLANNING STUDY
From Columbia To Greensburg
Location Map
Legend
Lakes
KY-61
Corporate Limits
State Roads
County Boundary
Waterways
MAP SCALE: 1 inch = 5 miles
GREEN
ADAIR
Greensburg
KY-61
KY-210
KY-424
KY-323
KY-2783
KY-2765
KY-1464
KY-218
KY-565
KY-1913
KY-682
KY-206
KY-1729
KY-80
KY-1952
N
W
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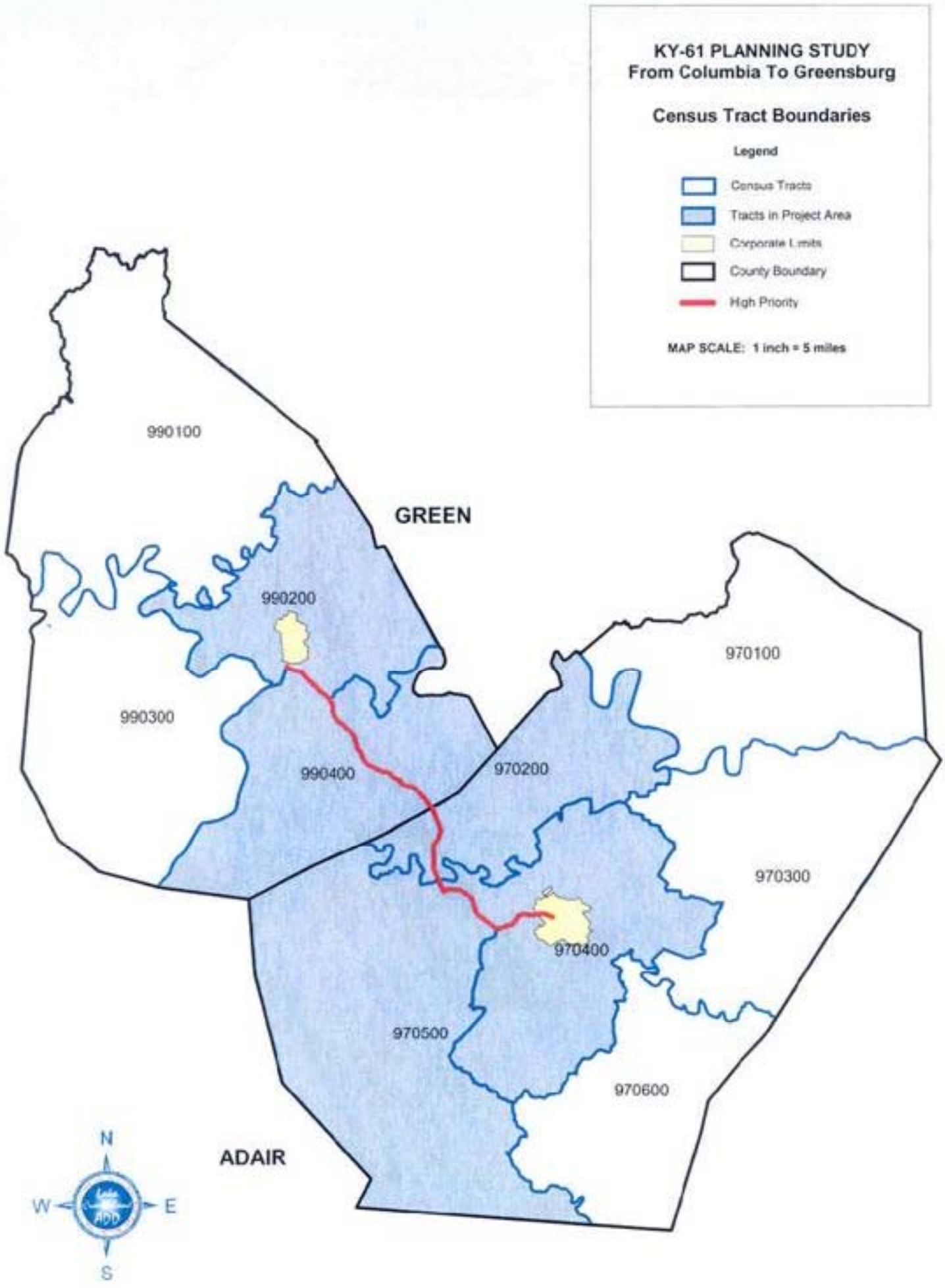
KY-61 PLANNING STUDY
From Columbia To Greensburg
Census Tract Boundaries
Legend
Census Tracts
Tracts in Project Area
Corporate Limits
County Boundary
High Priority
MAP SCALE: 1 inch = 5 miles
990100
GREEN
990200
990300
990400
970100
970200
970300
970400
970500
970600
ADAIR
N
W
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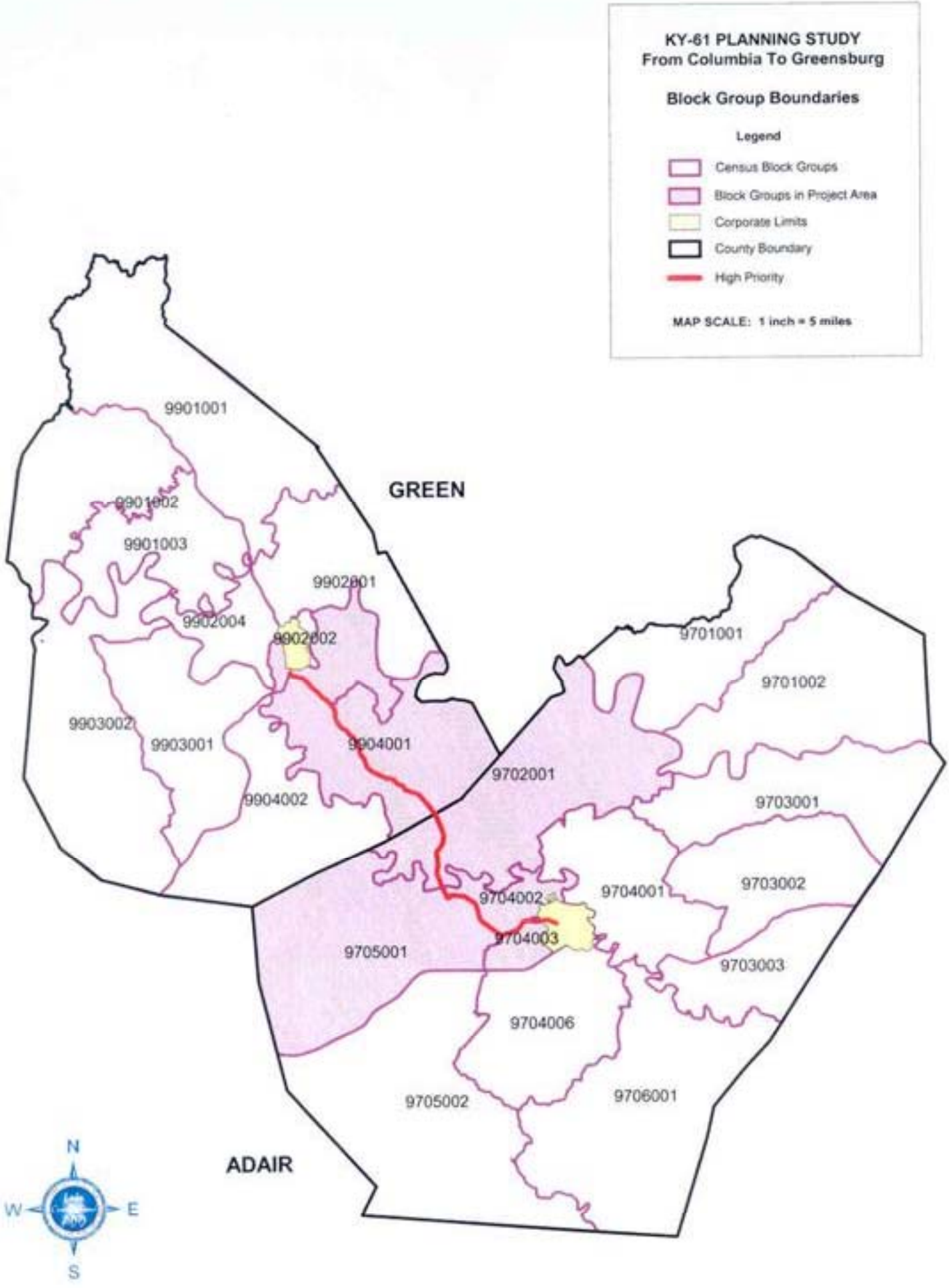
KY-61 PLANNING STUDY
From Columbia To Greensburg
Block Group Boundaries
Legend
Census Block Groups
Block Groups in Project Area
Corporate Limits
County Boundary
High Priority
MAP SCALE: 1 inch = 5 miles
9901001
9901002
9901003
9902001
9902002
9902004
9903001
9903002
9904001
9904002
GREEN
9701001
9701002
9702001
9703001
9703002
9703003
9704001
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9704003
9704006
9705001
9705002
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ADAIR COUNTY POPULATION BY RACE (BY CENSUS TRACT)

REGION	TOTAL POPULATION	WHITES	% OF POP	BLACKS	% OF POP	INDIAN	% OF POP	ASIAN	% OF POP	HISPANIC	% OF POP
Kentucky	3,685,296	3,391,832	92.04%	262,907	7.13%	5,769	0.16%	17,812	0.48%	21,984	0.60%
Adair County	15,360	14,853	96.70%	459	2.99%	15	0.10%	24	0.16%	89	0.58%
TR 970100	1,343	1,323	98.51%	20	1.49%	0	0.00%	0	0.00%	3	0.22%
TR 970200	1,177	1,134	96.35%	41	3.48%	0	0.00%	0	0.00%	8	0.68%
TR 970300	2,514	2,497	99.32%	13	0.52%	2	0.08%	2	0.08%	7	0.28%
TR 970400	6,929	6,557	94.63%	342	4.94%	9	0.13%	15	0.22%	44	0.64%
TR 970500	2,180	2,141	98.21%	34	1.56%	2	0.09%	2	0.09%	27	1.24%
TR 970600	1,217	1,201	98.69%	9	0.74%	2	0.16%	5	0.41%	0	0.00%

NOTE: All data is from the 1990 Census of Population and Housing.

GREEN COUNTY POPULATION BY RACE (BY CENSUS TRACT)

REGION	TOTAL POPULATION	WHITES	% OF POP	BLACKS	% OF POP	INDIAN	% OF POP	ASIAN	% OF POP	HISPANIC	% OF POP
Green County	10,371	9,988	96.31%	349	3.37%	11	0.11%	11	0.11%	60	0.58%
TR 990100	2,703	2,642	97.74%	54	2.00%	2	0.07%	5	0.18%	12	0.44%
TR 990200	4,084	3,831	93.81%	234	5.73%	4	0.10%	6	0.15%	24	0.59%
TR 990300	2,040	2,039	99.95%	0	0.00%	1	0.05%	0	0.00%	12	0.59%
TR 990400	1,544	1,476	95.60%	61	3.95%	4	0.26%	0	0.00%	12	0.78%

NOTE: All data is from the 1990 Census of Population and Houisng.

ADAIR COUNTY POPULATION BY RACE (BY BLOCK GROUPS)

REGION	TOTAL POPULATION	WHITES	% OF POP	BLACKS	% OF POP	INDIAN	% OF POP	ASIAN	% OF POP	HISPANIC	% OF POP
ntucky	3,685,296	3,391,832	92.04%	262,907	7.13%	5,769	0.16%	17,812	0.48%	21,984	0.60%
lair County	15,360	14,853	96.70%	459	2.99%	15	0.10%	24	0.16%	89	0.58%
R 970200	1,177	1,134	96.35%	41	3.48%	0	0.00%	0	0.00%	8	0.68%
R 970400	6,929	6,557	94.63%	342	4.94%	9	0.13%	15	0.22%	44	0.64%
G 970400-1	1,818	1,801	99.06%	13	0.72%	1	0.06%	3	0.17%	21	1.16%
G 970400-2	1,007	988	98.11%	17	1.69%	1	0.10%	0	0.00%	9	0.89%
G 970400-3	1,071	989	92.34%	80	7.47%	1	0.09%	1	0.09%	0	0.00%
G 970400-4	933	798	85.53%	132	14.15%	2	0.21%	1	0.11%	3	0.32%
G 970400-5	1,300	1,204	92.62%	80	6.15%	4	0.31%	10	0.77%	5	0.38%
G 970400-6	800	777	97.13%	20	2.50%	0	0.00%	0	0.00%	6	0.75%
R 970500	2,180	2,141	98.21%	34	1.56%	2	0.09%	2	0.09%	27	1.24%
G 970500-1	1,126	1,107	98.31%	17	1.51%	1	0.09%	1	0.09%	26	2.31%
G 970500-2	1,054	1,034	98.10%	17	1.61%	1	0.09%	1	0.09%	1	0.09%

OTE: All data is from the 1990 Census of Population and Housing.

GREEN COUNTY POPULATION BY RACE (BY BLOCK GROUPS)

REGION	TOTAL POPULATION	WHITES	% OF POP	BLACKS	% OF POP	INDIAN	% OF POP	ASIAN	% OF POP	HISPANIC	% OF POP
entucky	3,685,296	3,391,832	92.04%	262,907	7.13%	5,769	0.16%	17,812	0.48%	21,984	0.60%
reen County	10,371	9,988	96.31%	349	3.37%	11	0.11%	11	0.11%	60	0.58%
R 990200	4,084	3,831	93.81%	234	5.73%	4	0.10%	6	0.15%	24	0.59%
G 990200-1	995	956	96.08%	39	3.92%	0	0.00%	0	0.00%	1	0.10%
G 990200-2	897	839	93.53%	54	6.02%	4	0.45%	0	0.00%	0	0.00%
G 990200-3	498	451	90.56%	42	8.43%	0	0.00%	2	0.40%	5	1.00%
G 990200-4	880	812	92.27%	61	6.93%	0	0.00%	1	0.11%	13	1.48%
G 990200-5	814	773	94.96%	38	4.67%	0	0.00%	3	0.37%	5	0.61%
R 990400	1,544	1,476	95.60%	61	3.95%	4	0.26%	0	0.00%	12	0.78%
G 990400-1	819	762	93.04%	57	6.96%	0	0.00%	0	0.00%	0	0.00%
G 990400-2	725	714	98.48%	4	0.55%	4	0.55%	0	0.00%	12	1.66%

OTE: All data is from the 1990 Census of Population and Housing.

PERSONS 65 YEARS AND OLDER (ADAIR COUNTY BY CENSUS TRACT)

REGION	TOTAL POPULATION	PERSONS 65 AND OLDER	% OF POP
Kentucky	3,685,296	466,845	12.67%
Adair County	15,360	2,409	15.68%
TR 970100	1,343	188	14.00%
TR 970200	1,177	170	14.44%
TR 970300	2,514	354	14.08%
TR 970400	6,929	1,252	18.07%
TR 970500	2,180	291	13.35%
TR 970600	1,217	154	12.65%

NOTE: All data is from the 1990 Census of Population and Housing.

PERSONS BELOW THE POVERTY LEVEL (ADAIR COUNTY BY CENSUS TRACT)

REGION	TOTAL POPULATION	PERSONS BELOW POVERTY	% OF POP
Kentucky	3,685,296	681,827	18.50%
Adair County	15,360	3,744	24.38%
TR 970100	1,343	421	31.35%
TR 970200	1,177	119	10.11%
TR 970300	2,514	724	28.80%
TR 970400	6,929	1,355	19.56%
TR 970500	2,180	722	33.12%
TR 970600	1,217	374	30.73%

NOTE: All data is from the 1990 Census of Population and Housing.

PERSONS 65 YEARS AND OLDER (GREEN COUNTY BY CENSUS TRACT)

REGION	TOTAL POPULATION	PERSONS 65 AND OLDER	% OF POP
Green County	10,371	1,857	17.91%
TR 990100	2,703	410	15.17%
TR 990200	4,084	865	21.18%
TR 990300	2,040	326	15.98%
TR 990400	1,544	403	26.10%

NOTE: All data is from the 1990 Census of Population and Housing.

PERSONS BELOW THE POVERTY LEVEL (GREEN COUNTY BY CENSUS TRACT)

REGION	TOTAL POPULATION	PERSONS BELOW POVERTY	% OF POP
Green County	10,371	2,188	21.10%
TR 990100	2,703	551	20.38%
TR 990200	4,084	920	22.53%
TR 990300	2,040	469	22.99%
TR 990400	1,544	248	16.06%

NOTE: All data is from the 1990 Census of Population and Housing.

PERSONS 65 YEARS AND OLDER (ADAIR COUNTY BY BLOCK GROUP)

REGION	TOTAL POPULATION	PERSONS 65 AND OLDER	% OF POP
Kentucky	3,685,296	466,845	12.67%
Adair County	15,360	2,409	15.68%
TR 970200	1,177	170	14.44%
TR 970400	6,929	1,252	18.07%
BG 970400-1	1,818	228	12.54%
BG 970400-2	1,007	171	16.98%
BG 970400-3	1,071	204	19.05%
BG 970400-4	933	315	33.76%
BG 970400-5	1,300	217	16.69%
BG 970400-6	800	117	14.63%
TR 970500	2,180	291	13.35%
BG 970500-1	1,126	139	12.34%
BG 970500-2	1,054	152	14.42%

NOTE: All data is from the 1990 Census of Population and Housing.

PERSONS BELOW THE POVERTY LEVEL (ADAIR COUNTY BY BLOCK GROUP)

REGION	TOTAL POPULATION	PERSONS BELOW POVERTY	% OF POP
Kentucky	3,685,296	681,827	18.50%
Adair County	15,360	3,744	24.38%
TR 970200	1,177	119	10.11%
TR 970400	6,929	1,355	19.56%
BG 970400-1	1,818	399	21.95%
BG 970400-2	1,007	151	15.00%
BG 970400-3	1,071	111	10.36%
BG 970400-4	933	194	20.79%
BG 970400-5	1,300	367	28.23%
BG 970400-6	800	133	16.63%
TR 970500	2,180	722	33.12%
BG 970500-1	1,126	348	30.91%
BG 970500-2	1,054	403	38.24%

NOTE: All data is from the 1990 Census of Population and Housing.

PERSONS 65 YEARS AND OLDER (GREEN COUNTY BY BLOCK GROUP)

REGION	TOTAL POPULATION	PERSONS 65 AND OLDER	% OF POP
Kentucky	3,685,296	466,845	12.67%
Green County	10,371	1,857	17.91%
TR 990200	4,084	865	21.18%
BG 990200-1	995	139	13.97%
BG 990200-2	897	189	21.07%
BG 990200-3	498	148	29.72%
BG 990200-4	880	166	18.86%
BG 990200-5	814	223	27.40%
TR 990400	1,544	403	26.10%
BG 990400-1	819	147	17.95%
BG 990400-2	725	109	15.03%

PERSONS BELOW THE POVERTY LEVEL (GREEN COUNTY BY BLOCK GROUP)

REGION	TOTAL POPULATION	PERSONS BELOW POVERTY	% OF POP
Kentucky	3,685,296	681,827	18.50%
Green County	10,371	2,188	21.10%
TR 990200	4,084	920	22.53%
BG 990200-1	995	148	14.87%
BG 990200-2	897	238	26.53%
BG 990200-3	498	108	21.69%
BG 990200-4	880	293	33.30%
BG 990200-5	814	133	16.34%
TR 990400	1,544	248	16.06%
BG 990400-1	819	54	6.59%
BG 990400-2	725	194	26.76%